

# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 210804

TO: Sow-Fun Hon  
Location: REM 77463  
Art Unit : 1772  
December 22, 2006

Q/349  
70/1

Case Serial Number: 10/502296

From: Mei Huang  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-3952  
Mei.huang@uspto.gov

### Search Notes

Examiner Hon,

- Formula 4-19 and Formula 24-43 hit 46 answers.
- Formula 4-19 and Formula 44 hit 8 answers.

Please feel free to contact me if you have any questions or if you would like to refine the search query,

Thank you for using STIC services!

Mei Huang



=> fil reg

FILE 'REGISTRY' ENTERED AT 10:11:13 ON 22 DEC 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 American Chemical Society (ACS)

=> d his

(FILE 'HOME' ENTERED AT 09:32:12 ON 22 DEC 2006)

FILE 'REGISTRY' ENTERED AT 09:32:55 ON 22 DEC 2006

L1 1 S 569343-70-0/RN  
ACT HON296F4/Q  
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L2 STR  
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ACT HON296F24/Q  
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L3 STR  
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ACT HON296F44/Q  
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L4 STR  
-----  
L5 50 S L2  
L6 961 S L2 FUL  
SAV L6 HON296/A  
L7 1 S (L2 AND (L3 OR L4)) SSS SAM SUB=L6  
L8 STR L4  
L9 2 S (L2 AND (L3 OR L8)) SSS SAM SUB=L6  
L10 1 S (L2 AND L3) SSS SAM SUB=L6  
L11 53 S (L2 AND L3) SSS FUL SUB=L6  
SAV L11 HON296S1/A  
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L13 6 S (L2 AND L8) SSS FUL SUB=L6  
SAV L13 HON296S2/A

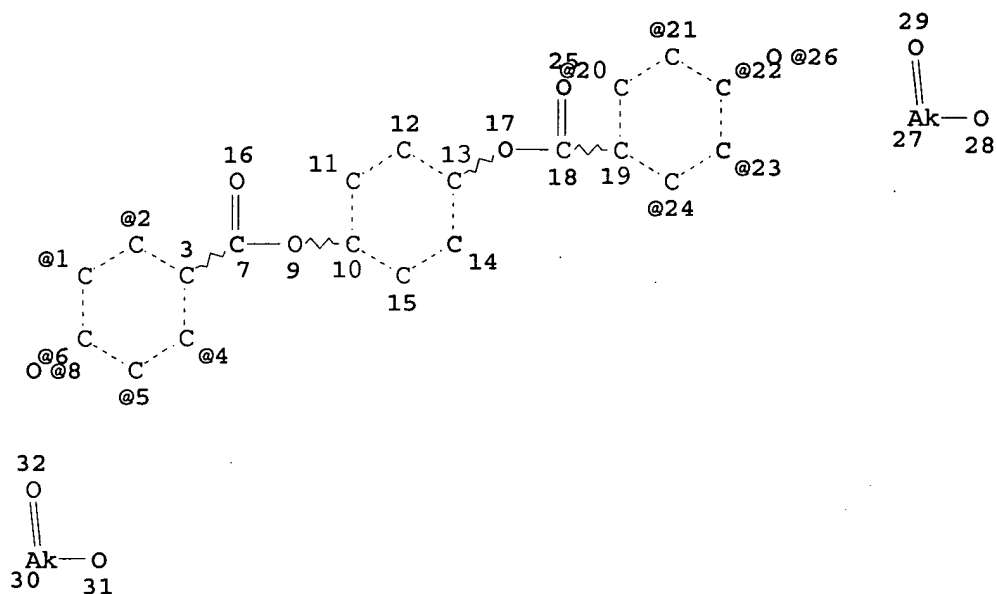
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L15 8 S L13

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=> d l6 que stat

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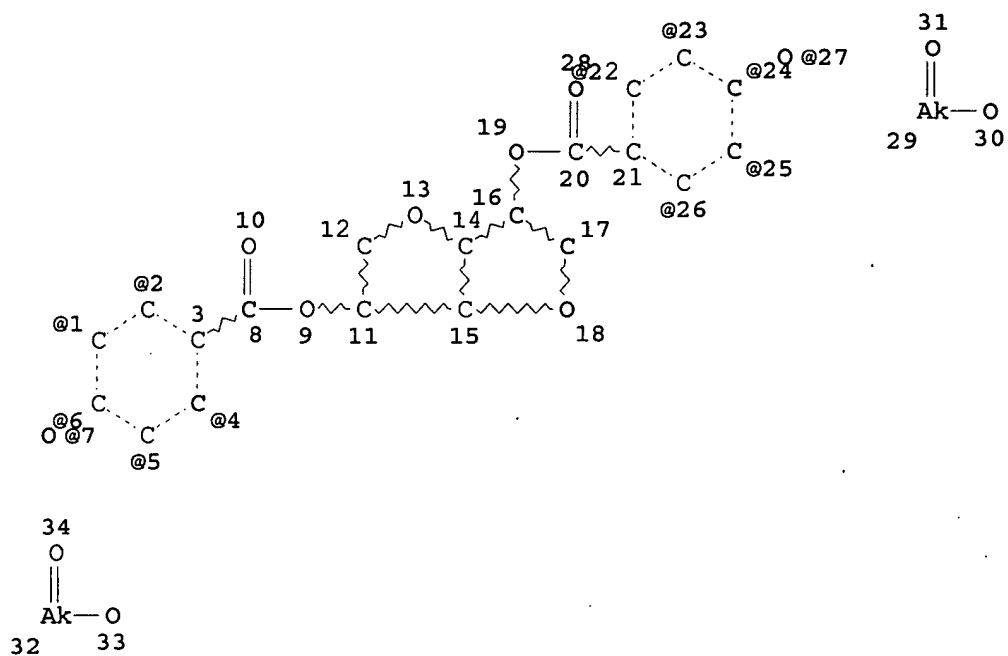
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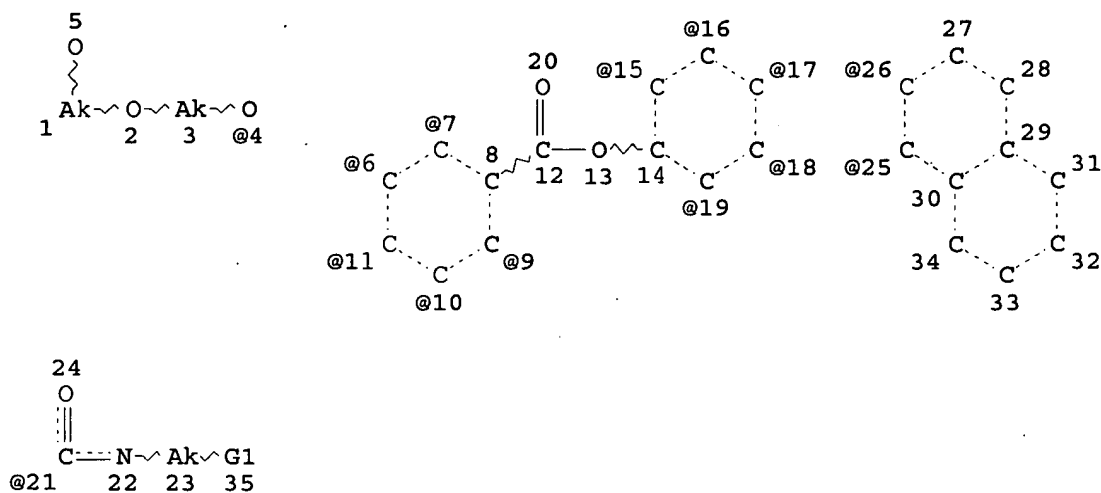


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DEFAULT ECLEVEL IS LIMITED
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STEREO ATTRIBUTES: NONE

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STEREO ATTRIBUTES: NONE

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 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l14 ibib abs hitstr hitind 1-46

L14 ANSWER 1 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:466484 HCAPLUS  
 DOCUMENT NUMBER: 144:477968  
 TITLE: Biaxial chiral nematic liquid crystal compositions and their thin films  
 INVENTOR(S): Nishikawa, Hideyuki  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006124666	A	20060518	JP 2005-279896	200509 27
PRIORITY APPLN. INFO.:			JP 2004-281096	A 200409 28

AB The compns. comprise  $\geq 1$  liquid crystals developing biaxial nematic phases and optically active substances. Compns. containing liquid crystal mixts. developing biaxial nematic phases and optically active substances are also claimed. The thin films are useful for optical retarders.

IT 886449-03-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(biaxial chiral nematic liquid crystals for thin films)

RN 886449-03-2 HCAPLUS

CN D-ribo-Hexitol, 1,4:3,6-dianhydro-2-C-methyl-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 1,3,5-benzenetriyltris(1,3,4-oxadiazole-5,2-diyl-4,1-phenyleneoxy-3,1-propanediyl) tri-2-propenoate and 5-[[2,5-bis[[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoyl]oxy]phenyl]ethynyl]-2,3-dicyano-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
(CA INDEX NAME)

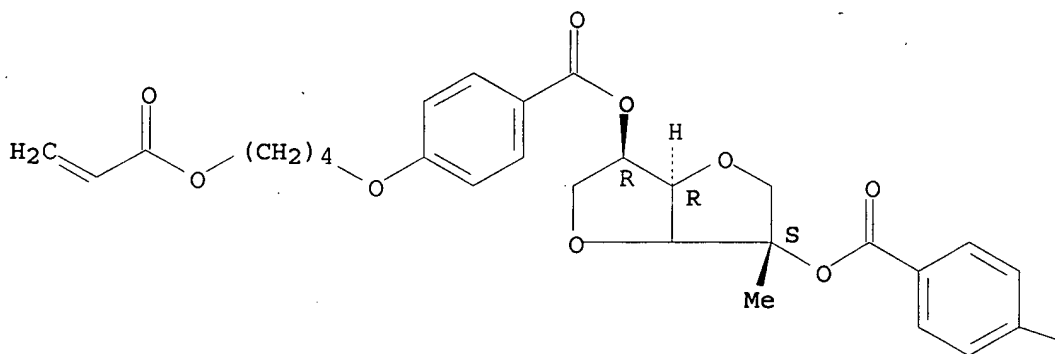
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CRN 886449-02-1

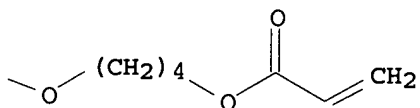
CMF C35 H40 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

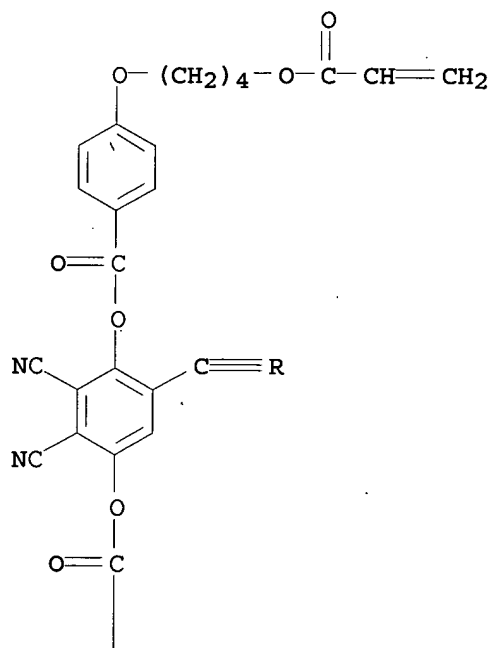


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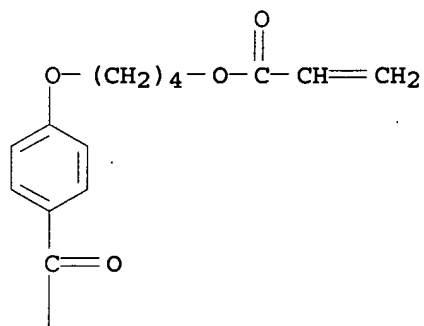
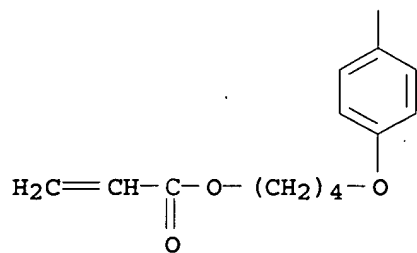
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CMF C72 H64 N2 O20

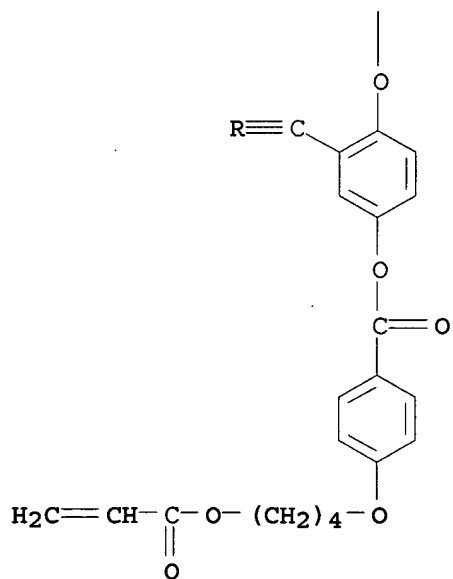
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PAGE 2-A



PAGE 3-A

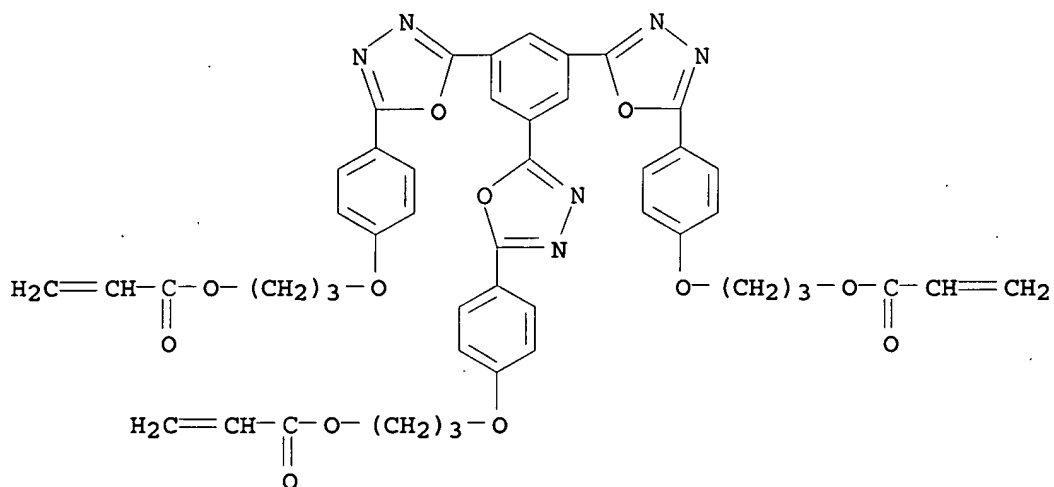


CM 3

CRN 844497-89-8

CMF C48 H42 N6 O12





CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

IT 886449-03-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(biaxial chiral nematic liquid crystals for thin films)

L14 ANSWER 2 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:299128 HCAPLUS

DOCUMENT NUMBER: 144:360432

TITLE: An optical compensation film capable of reducing a gray-scale inversion for a liquid crystal display with a wide viewing angle

INVENTOR(S): Tasaka, Tomoki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 46 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006066804	A1	20060330	US 2005-233042	20050923
JP 2006091551	A	20060406	JP 2004-278125	20040924
JP 2006091626	A	20060406	JP 2004-279001	20040927
PRIORITY APPLN. INFO.:			JP 2004-278125	A 20040924

JP 2004-279001

A

200409

27

AB An optical compensation film is described that is capable of reducing a gray-scale inversion and an elliptical polarizing plate, for a liquid crystal display with improved gray-scale inversion and wider viewing angle. Thus, the optical compensation film includes an optically anisotropic layer of liquid crystal composition expressing a biaxial nematic phase, in a state where a hybrid alignment and a twisted alignment are provided.

IT 881425-76-9

RL: DEV (Device component use); USES (Uses)

(optically anisotropic layer; liquid crystal display compensation film)

RN 881425-76-9 HCAPLUS

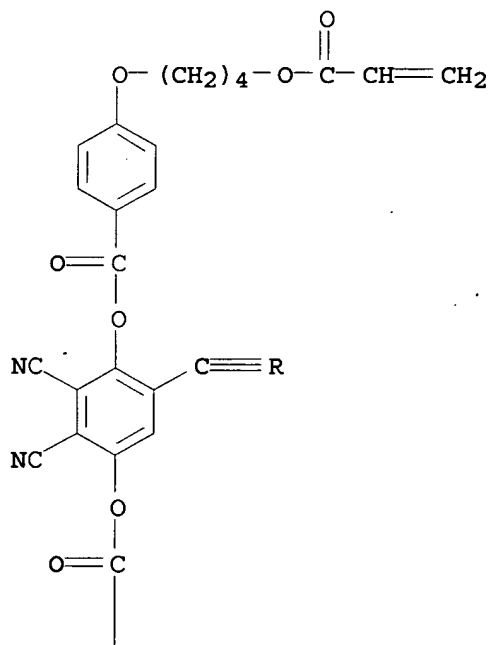
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 1,3,5-benzenetriyltris(1,3,4-oxadiazole-5,2-diyl-4,1-phenyleneoxy-3,1-propanediyl) tri-2-propenoate and 5-[[2,5-bis[[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoyl]oxy]phenyl]ethynyl]-2,3-dicyano-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

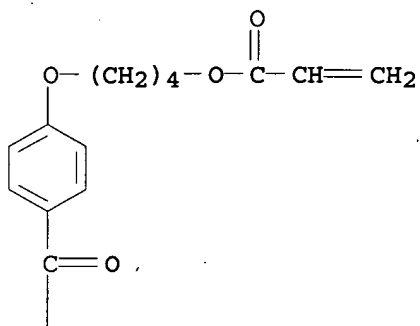
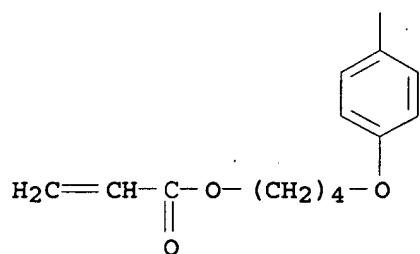
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CMF C72 H64 N2 O20

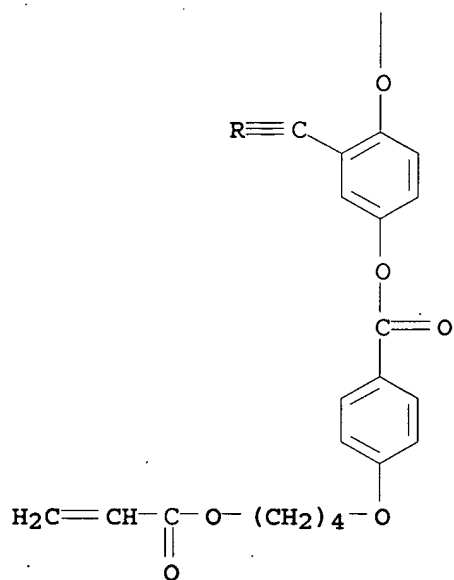
PAGE 1-A



PAGE 2-A



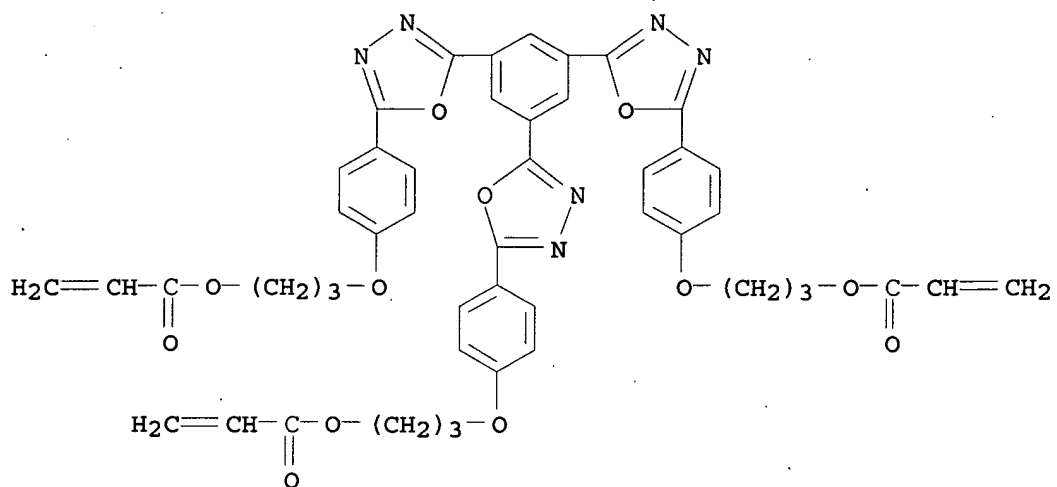
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CM 2

CRN 844497-89-8

CMF C48 H42 N6 O12



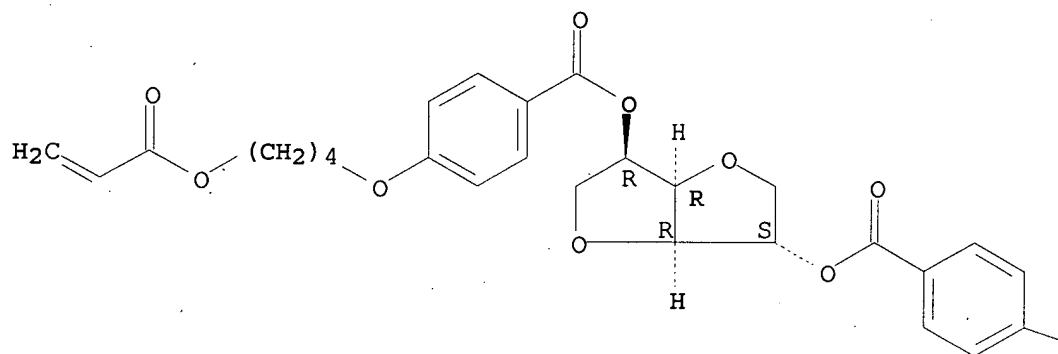
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CRN 250230-59-2

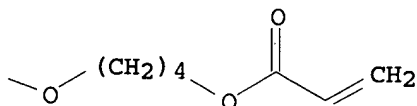
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



INCL 349179000

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

IT 28961-43-5, V 360 851773-11-0 881425-76-9

RL: DEV (Device component use); USES (Uses)

(optically anisotropic layer; liquid crystal display compensation film)

L14 ANSWER 3 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:10844 HCAPLUS

DOCUMENT NUMBER: 144:97849

TITLE: Method for manufacturing layered optical retardation film in brightness-enhancing optical film for polarized back light in liquid crystal displays

INVENTOR(S): Kawabata, Koya; Kanno, Hiroshi; Imagawa, Masatetsu

PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006003883	A	20060105	JP 2005-144256	20050517
				20040518

PRIORITY APPLN. INFO.:

JP 2004-147331

A

AB The title method includes the steps of: forming a coated layer containing a light-absorber, photopolymerizable cholesteric liquid crystals; irradiating the coated layer with an actinic ray of the wavelength providing  $\geq 9000 \text{ mol}^{-1} \cdot \text{L} \cdot \text{cm}^{-1}$  average absorbance with 0-10 mJ/cm<sup>2</sup> power to polymerized the liquid crystals; adjusting the pitch of the polymerizing cholesteric liquid crystal. The

method efficiently provides the optical film.

IT 252010-00-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(method for manufacturing layered optical retardation film for polarized back light in liquid crystal displays)

RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

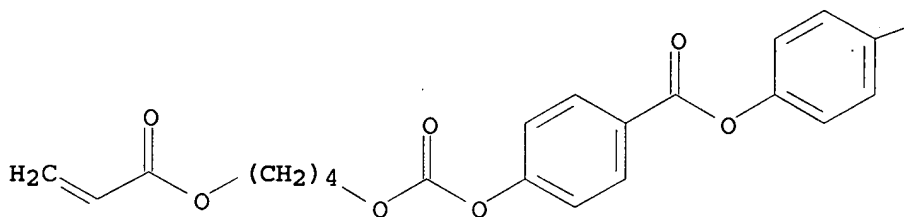
CM 1

CRN 223572-88-1

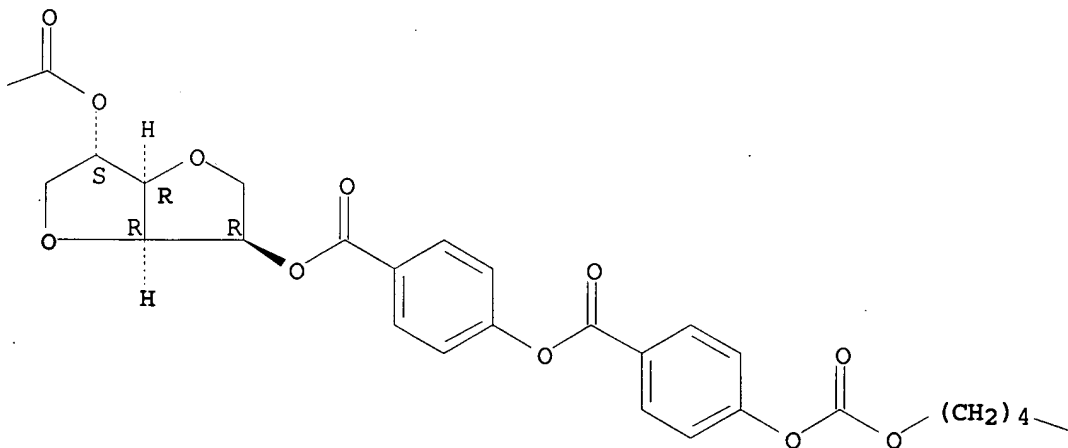
CMF C50 H46 O20

Absolute stereochemistry.

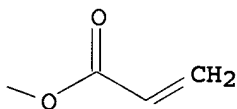
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PAGE 1-B



PAGE 1-C

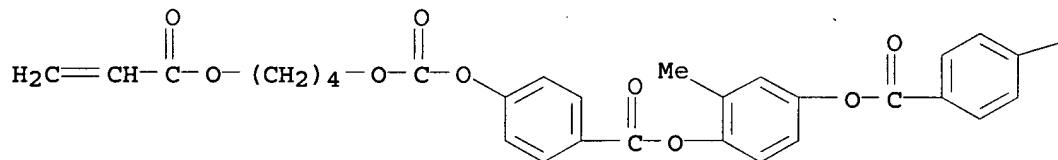


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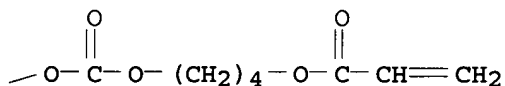
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CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 33041-41-7P **252010-00-7P**  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (method for manufacturing layered optical retardation film for polarized back light in liquid crystal displays)

L14 ANSWER 4 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:51032 HCAPLUS  
 DOCUMENT NUMBER: 142:136002  
 TITLE: Unsaturated polymerizable liquid crystalline compounds and polymers therefrom for liquid

crystal displays  
 INVENTOR(S): Ito, Maiko  
 PATENT ASSIGNEE(S): Chisso Corp., Japan; Chisso Petrochemical Corporation  
 SOURCE: Jpn. Kokai Tokkyo Koho, 180 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005015473	A	20050120	JP 2004-164067	20040602
PRIORITY APPLN. INFO.:			JP 2003-158019	A 20030603

OTHER SOURCE(S): MARPAT 142:136002

AB Title unsatd. polymerizable liquid crystalline compds. are represented by the formula of R1(A1Z1)m(A2Z2)n(A3Z3)qA4Z4P1 (R1: C1-20 alkyl, halogen, Z4P1; A1-A4: 1,4-cyclohexylene, 1,4-phenylene; Z1-Z3: the single bonded, C1-20 alkylene; Z4: C1-20 alkylene with one carbon-carbon single bond replaced by a double or triple bond; P1: the terminated group selected from OCOC(X):CH2, COCH:CH2, OCH:CH2, maleimide, oxirane, or X-substituted oxetane; X: halogen, CF3, or C1-5 alkyl). The system has a low lower-limit temperature of the liquid crystal phase and good compatibility with other compds. Polymers from the liquid crystal compds. show good transparency, mech. strength, and coatability, low water absorption, and other advantages. Thus, 1,4-bis(4-((E)-8-acryloyloxy-6-octenyloxy)benzoyloxy)benzene was prepared, 100 parts of which were added with 3 parts of Irgacure 907 and coated on a substrate to give a liquid crystalline film under UV irradiation

IT 827321-99-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (unsatd. polymerizable liquid crystalline compds. and polymers therefrom for liquid crystal displays)

RN 827321-99-3 HCAPLUS

CN Hexitol, 1,4:3,6-dianhydro-, bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoyl]oxy]benzoate], polymer with 1,4-phenylene bis[4-[[[(6E)-8-[(1-oxo-2-propenyl)oxy]-6-octenyl]oxy]benzoate] and (2E)-5-[4-(trans-4-propylcyclohexyl)phenoxy]-2-pentenyl 2-propenoate (9CI) (CA INDEX NAME)

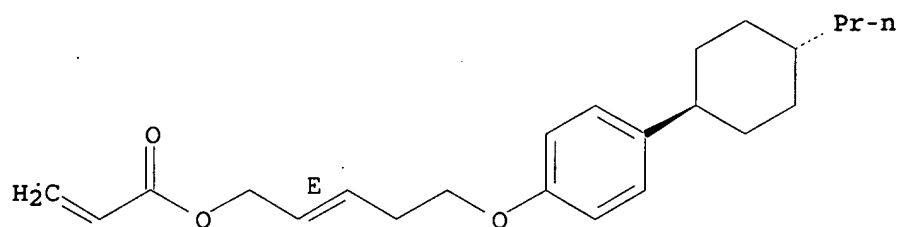
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CRN 827321-98-2

CMF C23 H32 O3

Relative stereochemistry.  
 Double bond geometry as shown.





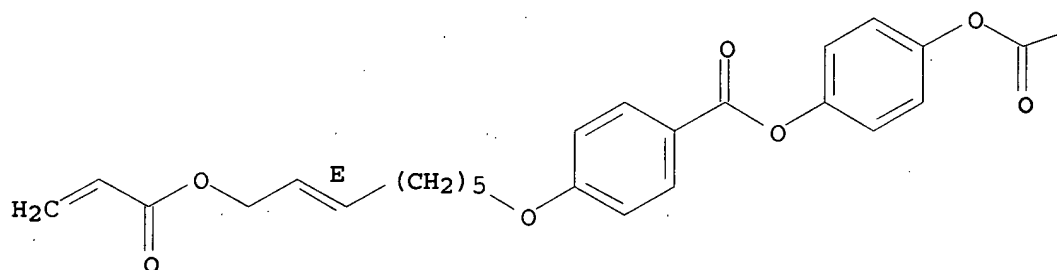
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CRN 827321-83-5

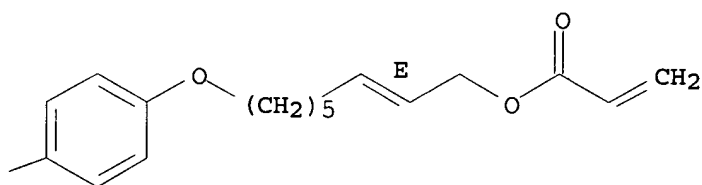
CMF C42 H46 O10

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

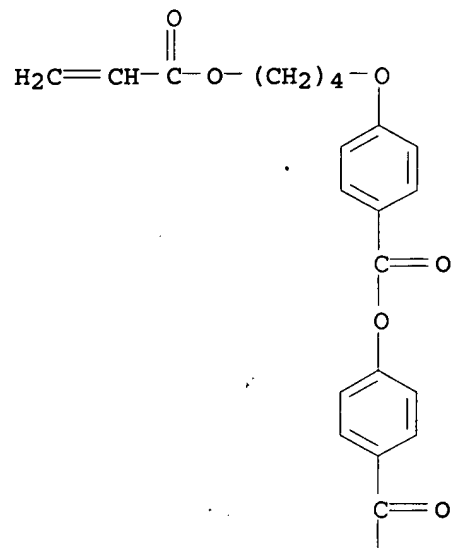


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CRN 607364-63-6

CMF C48 H46 O16

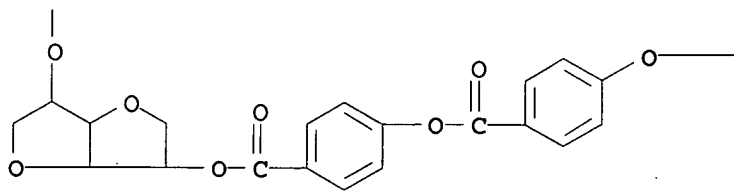
PAGE 1-A



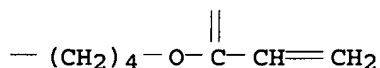
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PAGE 2-A



PAGE 2-B



IC ICM C07C069-773  
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 C07D213-65; C07D213-79; C07D239-26; C07D303-08; C07D303-14;  
 C07D303-16; C07D303-22; C07D303-48; C07D305-06; C07D319-06;  
 C07D403-12; C07D405-12; C07D407-10; C07D407-12  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 35, 37, 74  
 IT 827321-84-6P **827321-99-3P** 827322-00-9P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
 or engineered material use); PREP (Preparation); USES (Uses)  
 (unsatd. polymerizable liquid crystalline compds. and polymers therefrom  
 for liquid crystal displays)

L14 ANSWER 5 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:13790 HCAPLUS  
 DOCUMENT NUMBER: 142:82567  
 TITLE: Fabrication of patterned retarder layers of  
 polymerized liquid crystals by photolithography  
 INVENTOR(S): Ishizaki, Takeshi; Ito, Norihito; Mori, Hiroyuki  
 PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005004124	A	20050106	JP 2003-170268	20030616
PRIORITY APPLN. INFO.:			JP 2003-170268	20030616

AB In the process, polymerizable liquid crystal compns. are spread on substrates in a dimension larger than the display area to be aligned and then polymerized in inert atmospheric to form aligned polymer layers, which are covered in the display area with resist masks, etched through

the masks, and stripped off from the substrates to remain retarder patterns with good heat and chemical resistance. The patterns are useful for liquid crystal (or organic EL) displays.

IT 815586-82-4P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(cholesteric, retarder patterns; manufacture of retarder patterns for displays by polymerization of liquid crystalline monomer compns. in inert atmospheric

and their etch patterning)

RN 815586-82-4 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate] (9CI) (CA INDEX NAME)

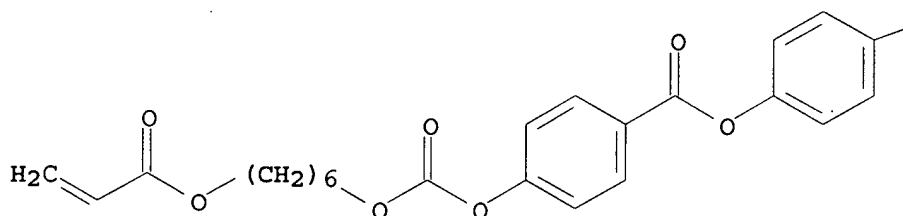
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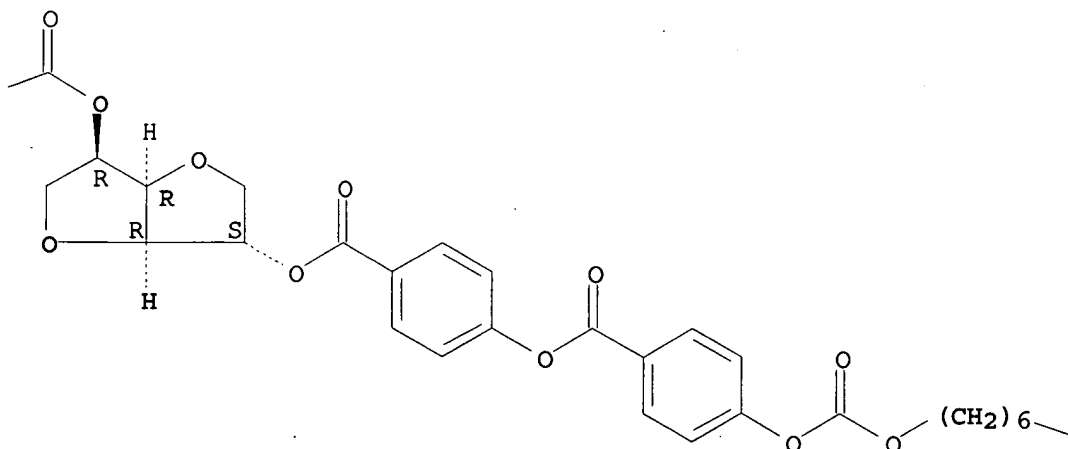
CMF C54 H54 O20

Absolute stereochemistry.

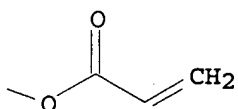
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PAGE 1-B



PAGE 1-C

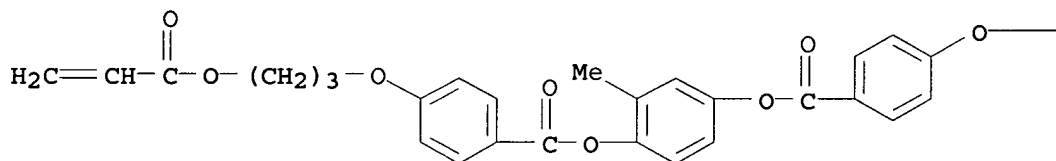


CM 2

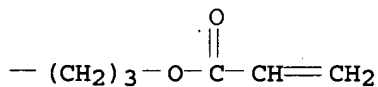
CRN 174063-87-7

CMF C33 H32 O10

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PAGE 1-B



IC ICM G02B005-30

ICS G02F001-1336

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 75

IT 815586-82-4P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(cholesteric, retarder patterns; manufacture of retarder patterns for displays by polymerization of liquid crystalline monomer compns. in inert atmospheric and their etch patterning)

L14 ANSWER 6 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:412027 HCAPLUS  
DOCUMENT NUMBER: 140:397461  
TITLE: Polarizers achieving low absorption loss at wide  
wavelength region  
INVENTOR(S): Wada, Minoru; Nagai, Michio; Okawa, Atsuhiko;  
Ichihashi, Mitsuyoshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004144880	A	20040520	JP 2002-308039	200210 23
PRIORITY APPLN. INFO.:				200210 23

AB The polarizer comprises, successively in this order, cholesteric liquid crystal (LC) layers, a  $\lambda/4$  plate, and a linearly polarizing film, wherein the LC layers reflect circularly polarized light with the same rotation direction as those of LC and wavelength of 450-700 nm incident at an inclination of 70° from the normal direction. The polarizer achieves high efficiency in utilizing incident light, especially for that launching at high inclined angle so as to provide white light with good hue when being assembled in LC displays.

IT 688030-81-1P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cholesteric liquid crystal; polarizer comprising cholesteric liquid crystal layer and quarter plate and linearly polarizing film, for liquid crystal displays)

RN 688030-81-1 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

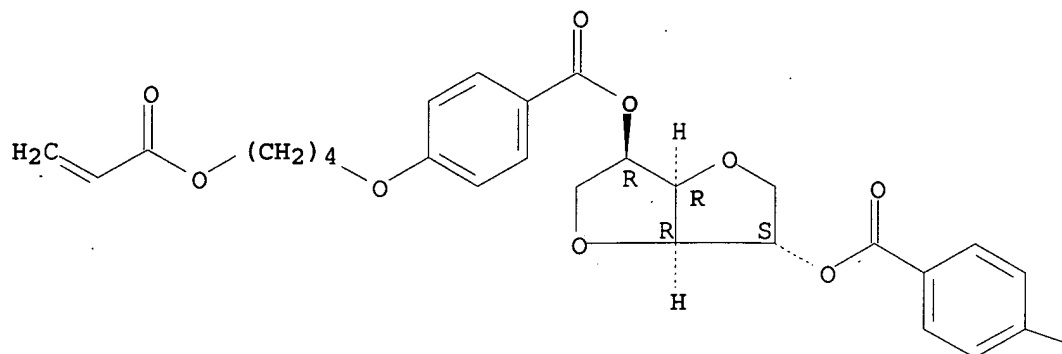
CM 1

CRN 250230-59-2

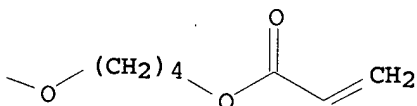
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

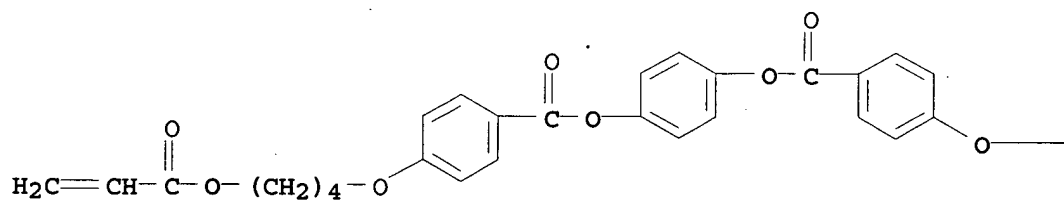


CM 2

CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A







US 2004037953	A1	20040226	US 2003-641117	200308 15
JP 2004136276	A	20040513	JP 2003-200542	200307 23
CN 1485146	A	20040331	CN 2003-154930	200308 22
PRIORITY APPLN. INFO.:			JP 2002-241350	A 200208 22
			JP 2003-200542	A 200307 23

AB A method for manufacturing a coated sheet that may form a coated layer having a uniform film thickness by a coating liquid even when a substrate has a large area is provided. A method for manufacturing a coated sheet to form a coated layer by a process including a process (1) for coating a coating liquid including a resin material and a solvent on a substrate, and a drying process (2) for drying a coated liquid, wherein a drying is performed under drying wind flow having an average wind speed of 10 m/s or less until a viscosity of the coated liquid in the drying process (2) reaches at least 50 [mPa·s] at drying temps.

IT 252010-00-7P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacturing coated sheet, optical functional layer for liquid crystal display device)

RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

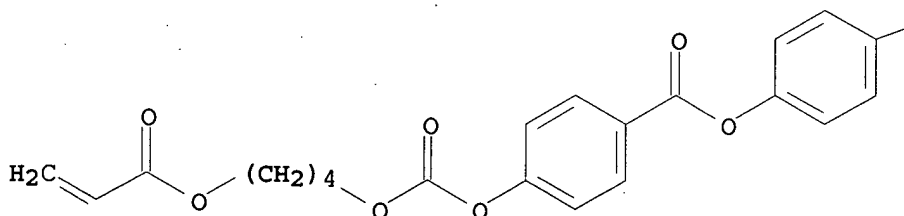
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CRN 223572-88-1

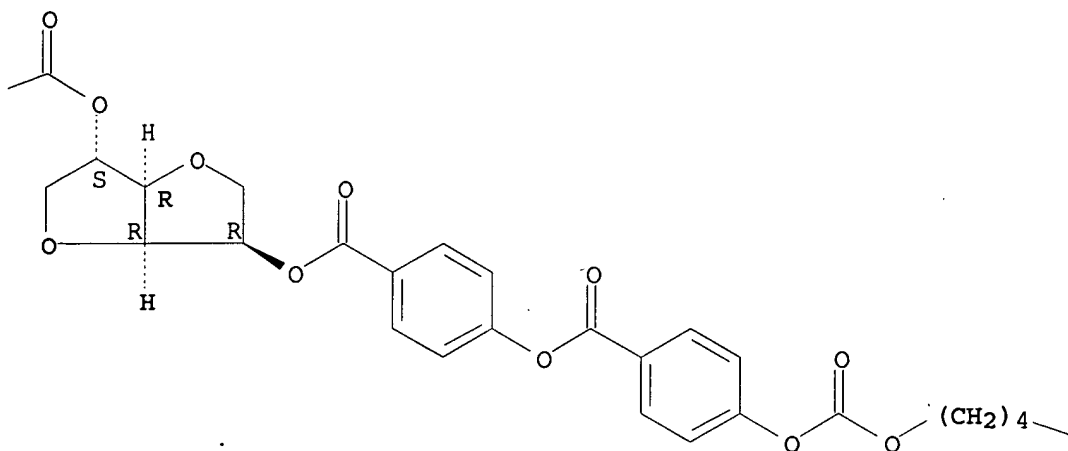
CMF C50 H46 O20

Absolute stereochemistry.

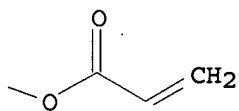
PAGE 1-A



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PAGE 1-C

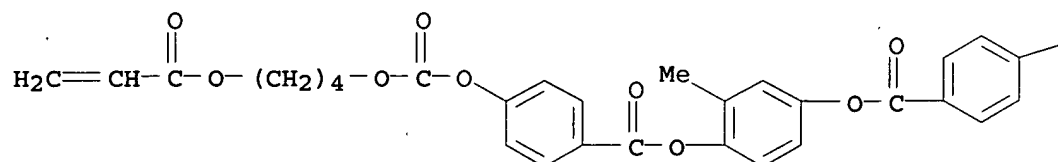


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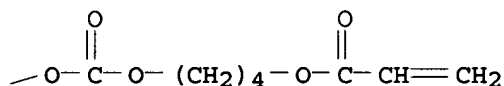
CRN 187585-64-4

CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM B05D005-06  
ICS B05D003-02  
INCL 427162000; 427372200  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 252010-00-7P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacturing coated sheet, optical functional layer for liquid crystal display device)

L14 ANSWER 8 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:36658 HCAPLUS  
DOCUMENT NUMBER: 140:112930  
TITLE: Composition for the production of a thermal insulating coating  
INVENTOR(S): Parker, Robert; Schneider, Norbert; Wagenblast, Gerhard; Boehm, Arno  
PATENT ASSIGNEE(S): BASF AG, Germany  
SOURCE: Ger. Offen., 30 pp.  
CODEN: GWXXBX.  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10230388	A1	20040115	DE 2002-10230388	20020705
WO 2004005427	A2	20040115	WO 2003-EP7201	20030704
WO 2004005427	A3	20041014		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,				

LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
 ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG

AU 2003253028 A1 20040123 AU 2003-253028

200307  
 04

EP 1521815 A2 20050413 EP 2003-762634

200307  
 04

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
 SK

CN 1665905 A 20050907 CN 2003-815995

200307  
 04

JP 2006505632 T 20060216 JP 2004-518721

200307  
 04

US 2005221091 A1 20051006 US 2004-518711

200412  
 22

PRIORITY APPLN. INFO.:

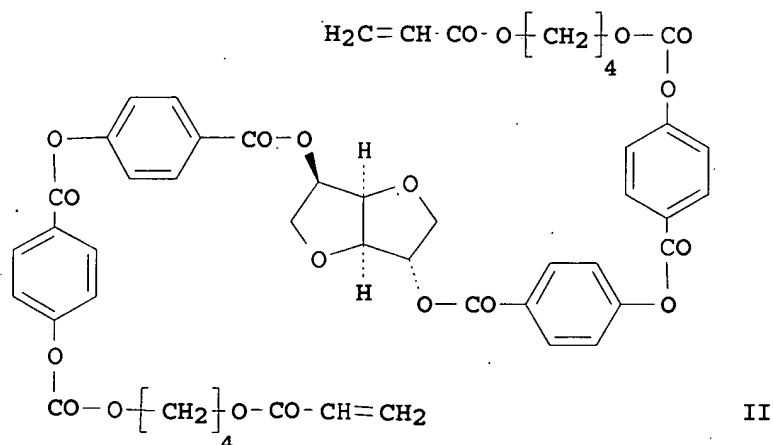
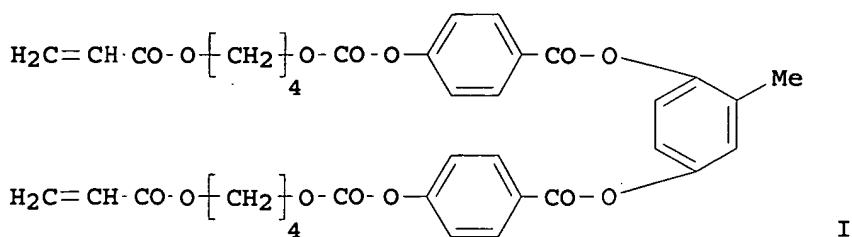
DE 2002-10230388 A

200207  
 05

WO 2003-EP7201 W

200307  
 04

OTHER SOURCE(S): MARPAT 140:112930  
 GI



AB Compns. for manufacture of thermal insulating coatings contain (i) heat-absorbing  $\text{XmP}(\text{O-p-C}_6\text{H}_4\text{CMe}_2\text{CH}_2\text{R})_n$  [ $\text{X} = \text{Cl}$  or  $\text{Br}$ ,  $\text{P}$  = nucleophile- and base-resistant (aryl-substituted) conjugated polycyclic group from of  $\text{CONHCO}$ ,  $\text{CO}_2\text{H}$ , and  $\text{COOCO}$  groups,  $\text{R}$  = organic,  $m = 0-15$ ,  $n = 1-16$ ,  $n + m \leq 16$ ] and (ii)  $\geq 1$  of an IR-reflecting component selected from (a)  $\geq 1$  achiral nematic polymerizable monomer (e.g., I) and  $\geq 1$  chiral polymerizable monomer (e.g., II), (b)  $\geq 1$  cholesteric polymerizable monomer, (c)  $\geq 1$  cholesteric crosslinkable polymer, and (d)  $\geq 1$  cholesteric polymer in polymerizable diluent. The coatings are manufactured by application of the compns. to substrates, optionally, orienting, and hardening.

IT 252010-00-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cured binder; compns. containing tertiary alkylphenoxy-substituted polycyclic compound heat absorbers and IR-reflecting component based on liquid crystalline polymerizable monomers or crosslinkable polymers for production of thermal insulating coatings)

RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

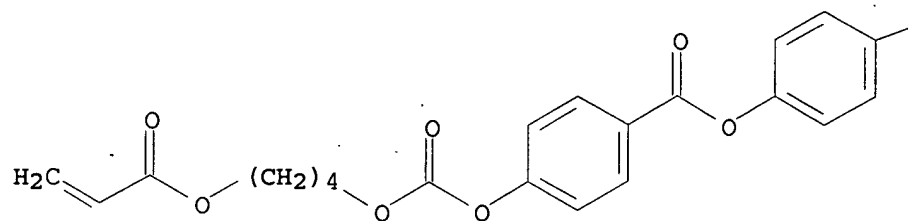
CM 1

CRN 223572-88-1

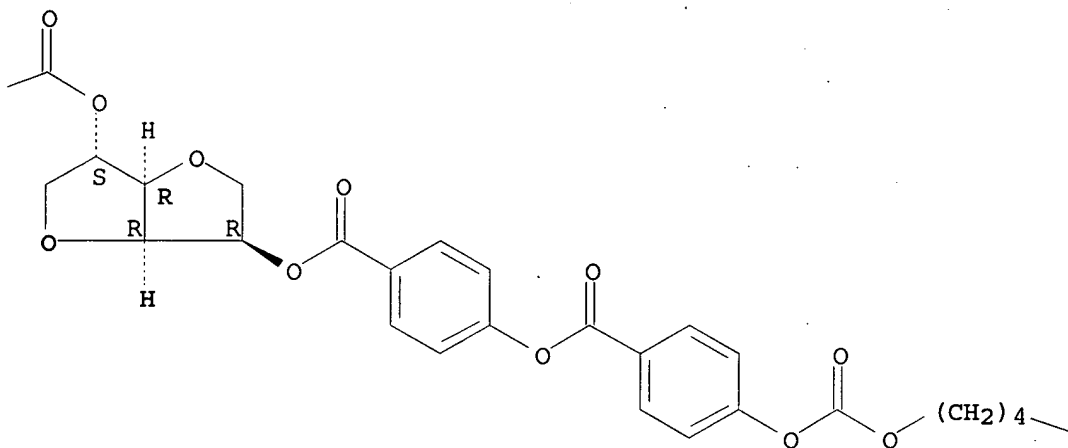
CMF C50 H46 O20

Absolute stereochemistry.

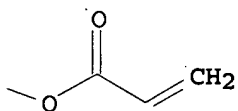
PAGE 1-A



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PAGE 1-C

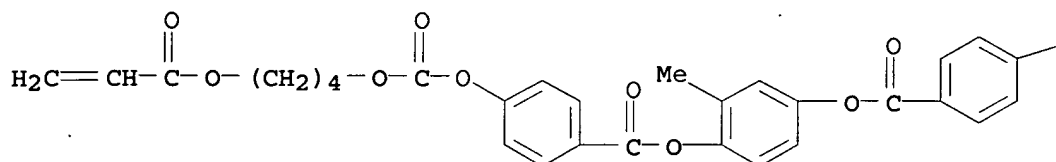


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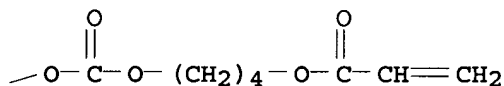
CRN 187585-64-4

CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM C08L067-00

ICS C09D005-33

CC 42-7 (Coatings, Inks, and Related Products)

IT 252010-00-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(cured binder; compns. containing tertiary alkylphenoxy-substituted polycyclic compound heat absorbers and IR-reflecting component based on liquid crystalline polymerizable monomers or crosslinkable polymers for production of thermal insulating coatings)

L14 ANSWER 9 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:20638 HCAPLUS

DOCUMENT NUMBER: 140:94454

TITLE: Chiral dopant with phenylethanedil functionality

INVENTOR(S): Lub, Johan; Wegh, Rene T.

PATENT ASSIGNEE(S): Koninklijke Philips Electronics N. V., Neth.

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004002935	A1	20040108	WO 2003-IB2927	20030613

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,

LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
 ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
 NE, SN, TD, TG

AU 2003244961 A1 20040119 AU 2003-244961

200306  
 13

EP 1519910 A1 20050406 EP 2003-738435

200306  
 13

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
 SK

CN 1665772 A 20050907 CN 2003-815123

200306  
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JP 2005531629 T 20051020 JP 2004-517149

200306  
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US 2006022167 A1 20060202 US 2004-519604

200412  
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PRIORITY APPLN. INFO.:

EP 2002-77561

A

200206  
 28

WO 2003-IB2927

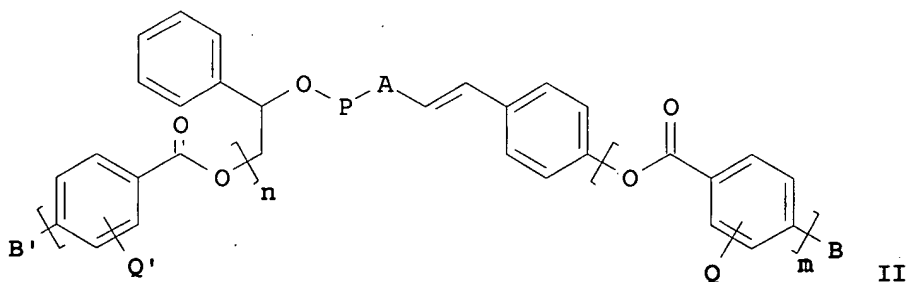
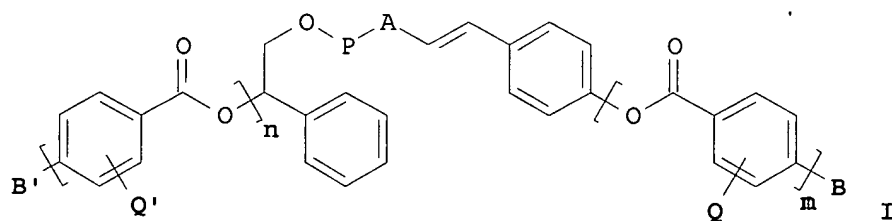
W

200306  
 13

OTHER SOURCE(S):

MARPAT 140:94454

GI





AB The invention pertains to a phenylethanediol derivative having  $\geq 1$  polymerizable group, characterized in that the phenylethanediol derivative further comprises  $\geq 1$  photo-convertible group for adjusting the helical twisting power of the phenylethanediol derivative. According to a preferred embodiment the phenylethanediol has the formula I or II, wherein A = bond or p-phenylene group; B, B' = independently (O)p-COH<sub>2</sub>O-O-CO-CR':CH<sub>2</sub>, o = 2-12; p = 0 or 1; R' = H or CH<sub>3</sub>; P = CH<sub>2</sub> or C:O; Q, Q' = H, C1-3 alkyl or alkoxy, halogen, CN; n = 1-3 integer; m = 0-2 integer. Thus, 1 g (R)-(-)-1-phenyl-1,2-ethanediol and 0.18 g 4-(6-acryloyloxyhexyloxy)cinnamic acid (preparation given) were reacted to give 3.84 g (R)-4-(6-acryloyloxyhexyloxy)cinnamic acid 2-(4-(6-acryloyloxyhexyloxy)cinnamoyloxy)-1-phenylethyl ester, 0.156 g of which was mixed with 2,5-di[4-(3-acryloyloxypropyloxy)phenoxyoxy] toluene 0.667, 2,5-di[4-(6-acryloyloxyhexyloxy)phenoxyoxy] toluene 0.167, and Darocure 4265 0.01 g, applied on a polyimide substrate, irradiated through a photo mask, and polymerized to give a cholesteric color filter.

IT 642471-50-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of chiral dopant with phenylethanediol functionality)

RN 642471-50-9 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate, 2-methyl-1,4-phenylene 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate and (1R)-1-phenyl-1,2-ethanediyl bis[3-[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]phenyl]-2-propenoate] (9CI) (CA INDEX NAME)

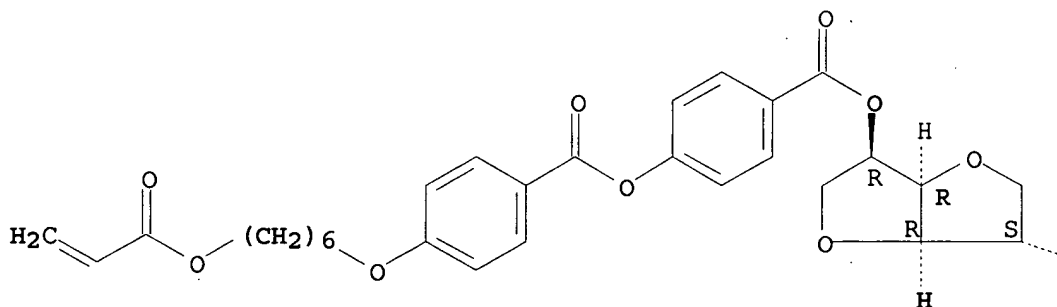
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CRN 642471-49-6

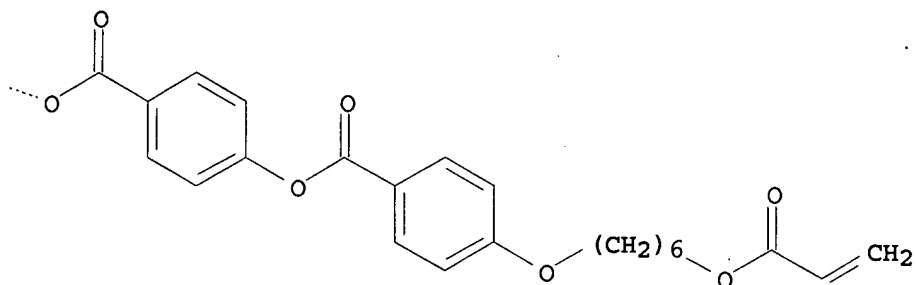
CMF C52 H54 O16

Absolute stereochemistry.

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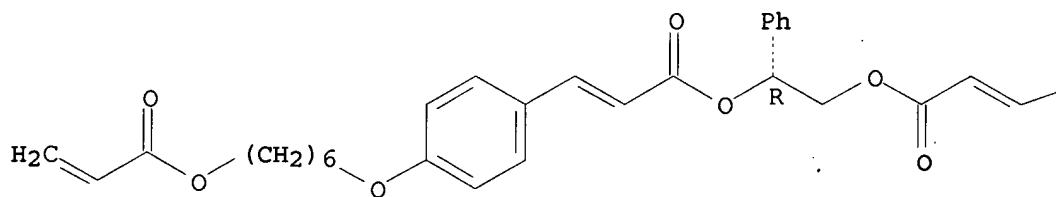
CM 2

CRN 642471-47-4

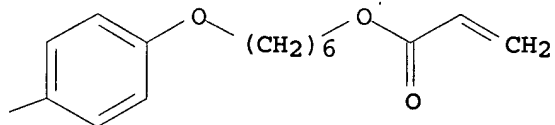
CMF C44 H50 O10

Absolute stereochemistry.  
Double bond geometry unknown.

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PAGE 1-B

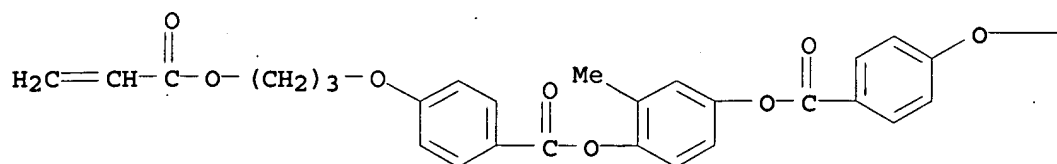


CM 3

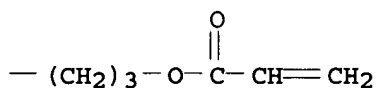
CRN 174063-87-7

CMF C33 H32 O10

PAGE 1-A



PAGE 1-B

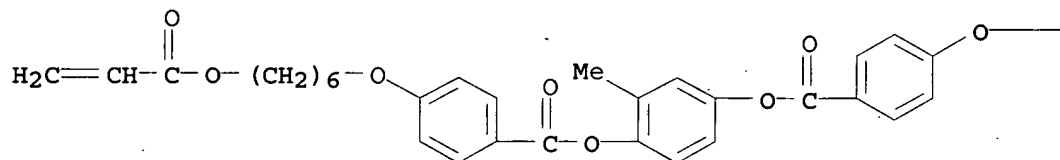


CM 4

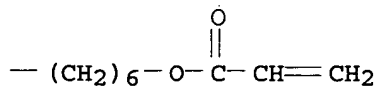
CRN 125248-71-7

CMF C39 H44 O10

PAGE 1-A



PAGE 1-B



IC ICM C07C069-90

ICS C07C069-92; C07C069-618; C07D493-04; C09K019-58; C07D307-00

CC 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38, 73, 74

IT 642471-48-5P **642471-50-9P** 642471-51-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of chiral dopant with phenylethanediol functionality)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L14 ANSWER 10 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:868189 HCAPLUS

MEI HUANG EIC1700 REM4B28 571-272-3952

22/12/2006

DOCUMENT NUMBER: 139:388571  
 TITLE: Optically active isosorbide-based polyesteramides, photoisomerizable chiral agents, liquid crystal compositions, and related devices thereof  
 INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi; Hayashi, Keiichiro; Kuroiwa, Ryuichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp. CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003313292	A	20031106	JP 2002-117814	20020419
US 2004011994	A1	20040122	US 2003-419260	20030421
US 6846540	B2	20050125		
PRIORITY APPLN. INFO.:			JP 2002-117814	A 20020419

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The polyesteramides (PEA) have unit I (or II) and COACO [R1, R8 = H, alkyl, aryl; R2-R5, R9, R12 = H, halo, alkyl(oxy); R6, R7, R13, R14 = H, alkyl; Ar1, Ar2 = 1,4-phenylene, naphthalene-2,6-diyl, single bond; Ar3, Ar4 = bivalent aromatic group; A = bivalent bridging group]. Compns. of PEA, liquid crystalline compds./monomers, and optional photopolymn. initiators having different sensitive wavelength from that of the polyesteramides, are also claimed. The original helical structure of PEA is largely changed by (imagewise) exposure and stabilized by photopolymn. of the monomers upon flood exposure. Further claimed are reflective color filters, optical films, and imaging media utilizing the thus-formed and -stabilized helical structure of PEA. The PEA of cis isomer show excellent heat stability and thereby improving color purity and resolution of devices as above.

IT 387822-81-3P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(circularly-polarized-light reflectors; isosorbide-based chiral polyesteramides having good heat stability as cis isomers for reflective color filters)

RN 387822-81-3 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2,6-naphthalenediyl

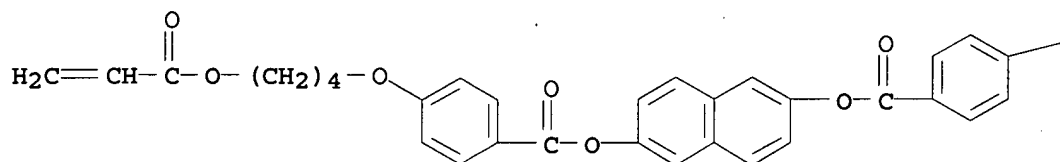
bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene  
bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX  
NAME)

CM 1

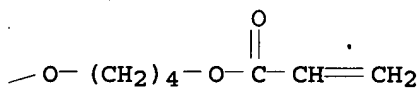
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



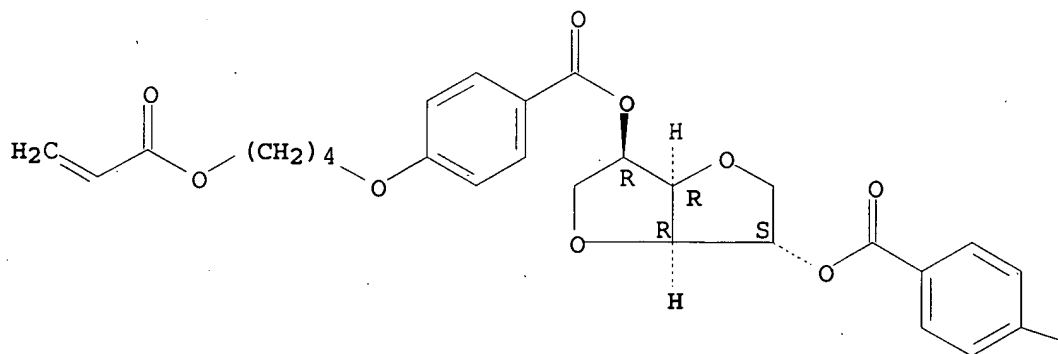
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CRN 250230-59-2

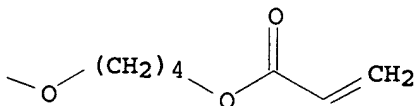
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

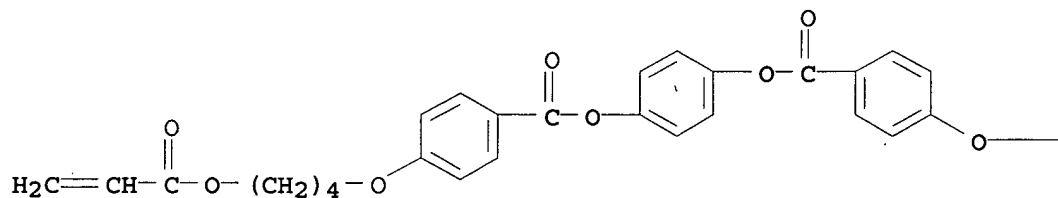


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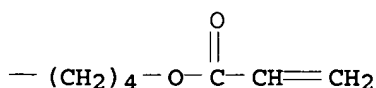
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IT 622853-00-3P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(isosorbide-based chiral polyesteramides having good heat stability as cis isomers for reflective color filters)

RN 622853-00-3 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)

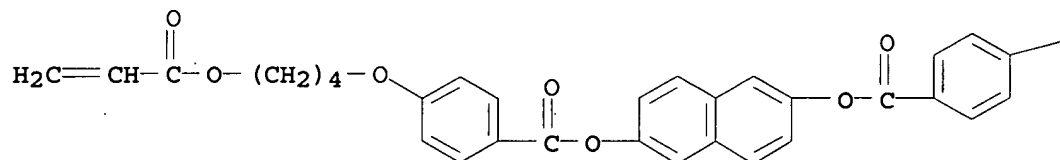
(CA INDEX NAME)

CM 1

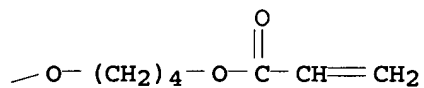
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



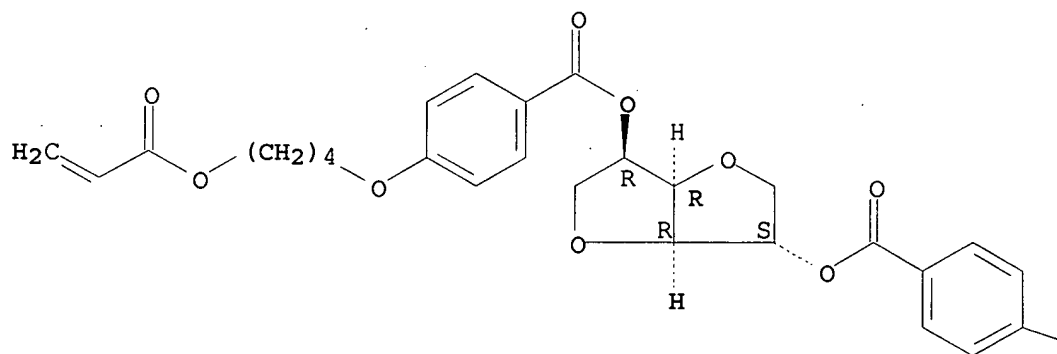
CM 2

CRN 250230-59-2

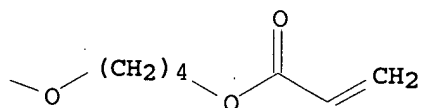
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

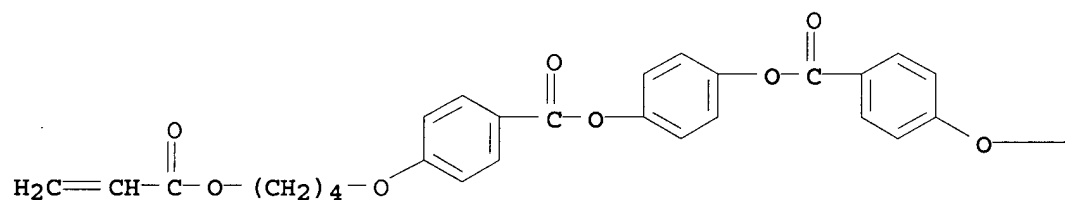


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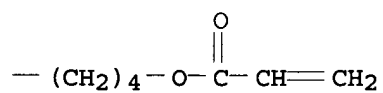
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B

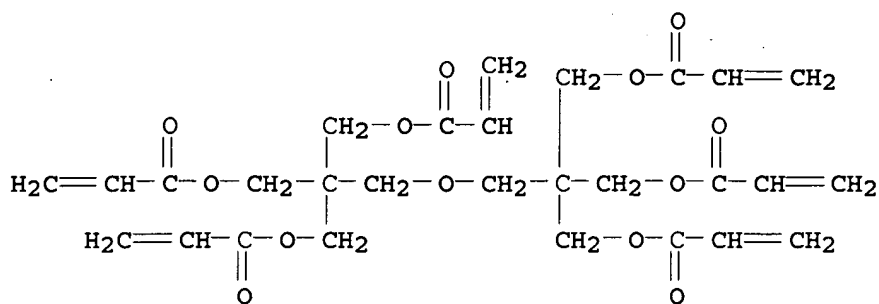


CM 4

CRN 29570-58-9

CMF C28 H34 O13





IC ICM C08G069-44  
 ICS C08F002-44; C08F283-04; C08F299-02; C08K005-00; C08L077-12;  
 C09K019-38; G02F001-13; G02F001-1335; C08L101-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38, 73

IT 387822-81-3P  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (circularly-polarized-light reflectors; isosorbide-based chiral  
 polyesteramides having good heat stability as cis isomers for  
 reflective color filters)

IT 339588-80-6P 622853-00-3P  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (isosorbide-based chiral polyesteramides having good heat  
 stability as cis isomers for reflective color filters)

L14 ANSWER 11 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:868119 HCAPLUS

DOCUMENT NUMBER: 139:356120

TITLE: Photoisomerizable and photosensitive optically  
 active isosorbides, their manufacturing method,  
 liquid crystal compositions and applications,  
 and method for changing and fixing helical  
 structure of liquid crystals

INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi;  
 Kuroiwa, Ryuichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

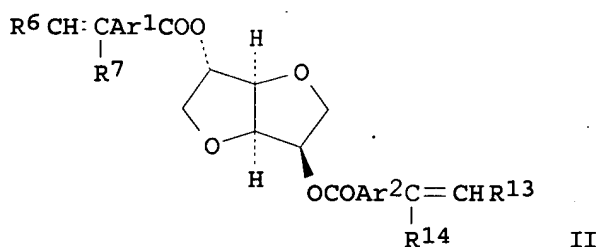
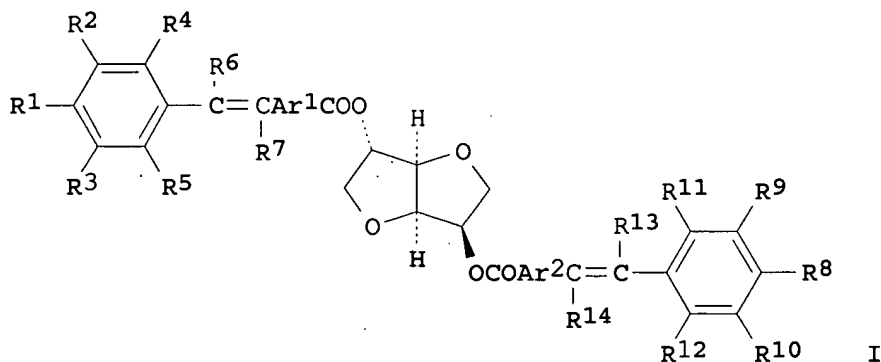
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003313187	A	20031106	JP 2002-116297	20020418
PRIORITY APPLN. INFO.:				200204

OTHER SOURCE(S):  
GI

MARPAT 139:356120



AB The isosorbides I (R1, R8 = NH2, alkyl, aryl, etc.; R2-R5, R9-R12 = H, halo, alkyl, alkoxy; R6, R7, R13, R14 = H, alkyl; Ar1, Ar2 = 1,4-phenylene, naphthalene-2,6-diyl, etc.), manufactured from optically active isosorbides II (R6, R7, R13, R14 = same as above) and corresponding aryl halides, are used as chiral agents for liquid crystal compns. containing photoinitiators having sensitive wavelength ranges different from I. For changing and fixing helical structures of liquid crystals, the compns. are imagewise irradiated at wavelength which I are sensitive to, followed by irradiating at wavelength which the photopolymn. initiators are sensitive to. The compns. are useful for color filters having high color saturation, optical films (e.g., optical compensation films, circular polarizer films) having high performance, and optical imaging media giving clear images. The color filters offering three-primary-color lights can be manufactured by one-step exposure with photomasks having imagewise varied light transmittance.

IT 619332-33-1P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(circular polarizer sheets; aa manufacture of photoisomerizable and photosensitive optically active isosorbides as chiral agents for liquid crystal compns. for color filters, optical films, and optical imaging materials)

RN 619332-33-1 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[2-[1-(2-ethyl-1-oxohexyl)-2,3-

dihydro-1H-indol-6-yl]ethenyl]benzoate], polymer with  
1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-  
propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl  
bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene  
bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX  
NAME)

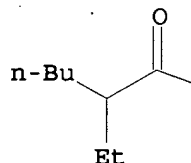
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CRN 619332-32-0

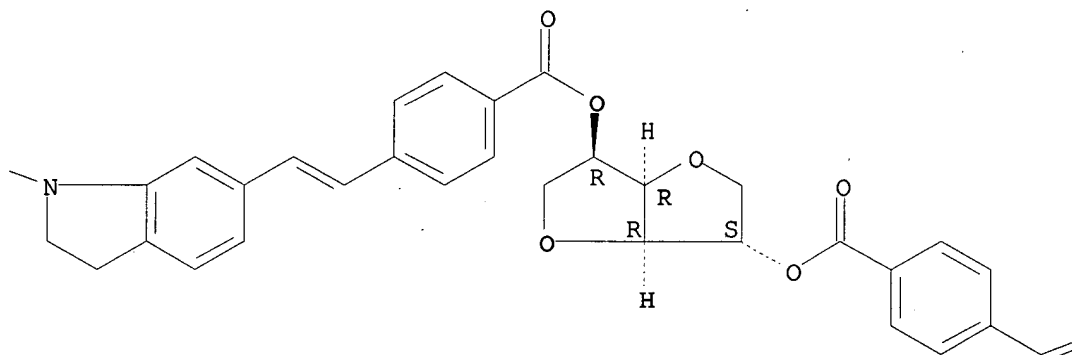
CMF C56 H64 N2 O8

Absolute stereochemistry.  
Double bond geometry unknown.

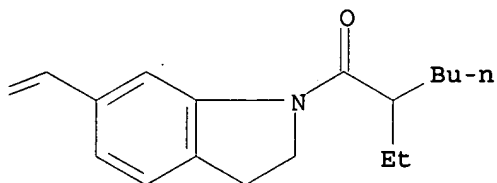
PAGE 1-A



PAGE 1-B



PAGE 1-C

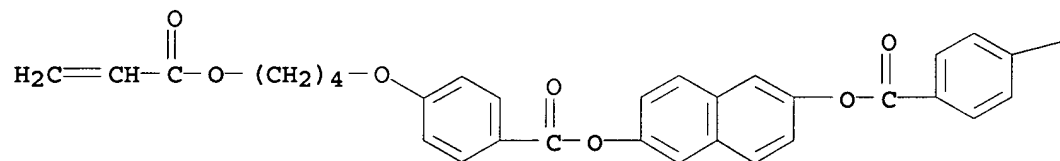


CM 2

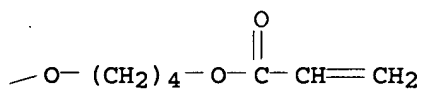
CRN 339588-79-3

CMF C38 H36 O10

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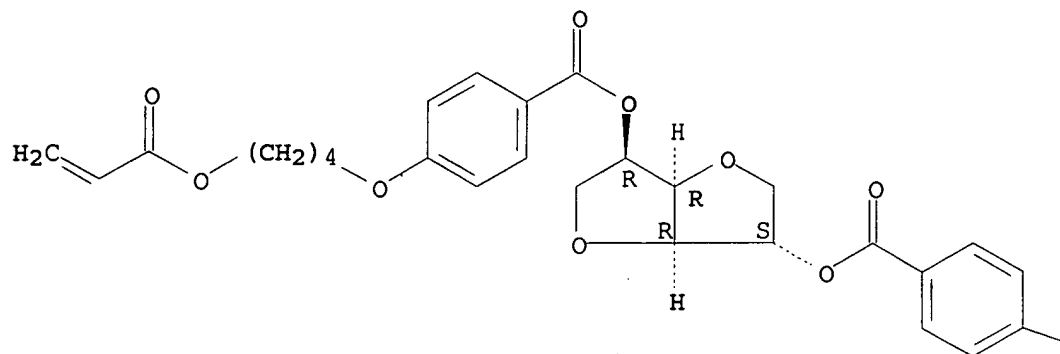
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CRN 250230-59-2

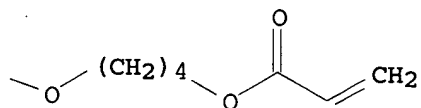
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



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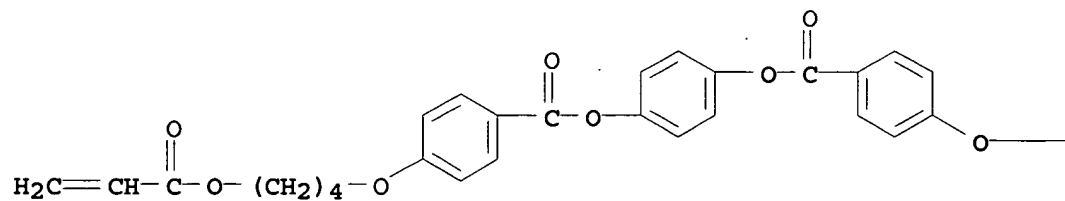


CM 4

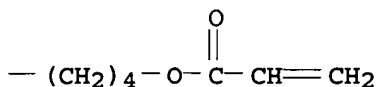
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IC ICM C07D493-04  
 ICS C09K019-54; G02B005-20; G02B005-30; G02F001-13; G02F001-1335;  
 G03F007-004; C07M007-00  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 28, 73, 75  
 IT 619332-33-1P  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (circular polarizer sheets; aa manufacture of photoisomerizable and  
 photosensitive optically active isosorbides as chiral agents for  
 liquid crystal compns. for color filters, optical films, and  
 optical imaging materials)

L14 ANSWER 12 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:841209 HCAPLUS

DOCUMENT NUMBER: 139:343524

TITLE: Photoisomerizable and photosensitive optically  
 active isosorbides, their manufacturing method,  
 liquid crystal compositions and applications,  
 and method for changing and fixing helical  
 structure of liquid crystals

INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi;  
 Hayashi, Keiichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

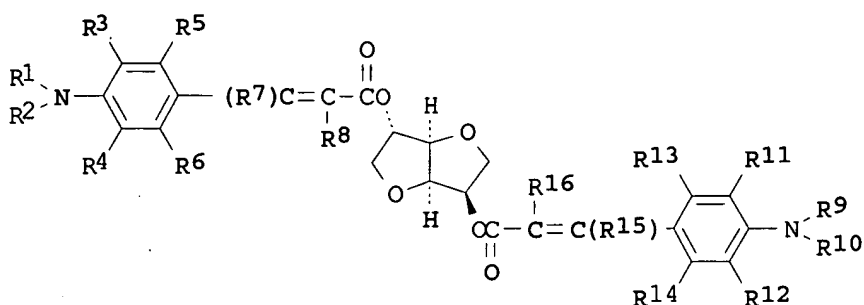
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

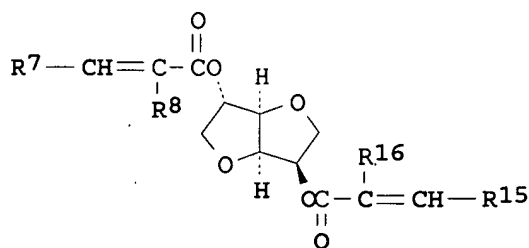
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003306491	A	20031028	JP 2002-116296	200204 18
PRIORITY APPLN. INFO.:				JP 2002-116296
				200204 18

OTHER SOURCE(S): MARPAT 139:343524

GI



I



II

AB The isosorbides I (R1, R2, R9, R10 = H, alkyl, aryl; R3-R6, R11-R14 = H, halo, alkyl, alkoxy; R7, R8, R15, R16 = H, alkyl), manufactured from optically active isosorbides II (R7, R8, R15, R16 = same as above) and corresponding aryl halides, are used as chiral agents for liquid crystal compns. containing photoinitiators having sensitive wavelength ranges different from I. For changing and fixing helical structures of liquid crystals, the compns. are imagewisely irradiated at wavelength which I are sensitive to, followed by irradiating at wavelength which the photopolymn. initiators are sensitive to. The compns. are useful for color filters having high color saturation, optical films (e.g., optical compensation films, circular polarizer films) having high performance, and optical imaging media giving clear images. The color filters offering three-primary-color lights can be manufactured by one-step exposure with photomasks having imagewise varied light transmittance.

IT 617699-15-7P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(circular polarizer films; manufacture of photoisomerizable and photosensitive optically active isosorbides as chiral agents for liquid crystal compns. for color filters, optical films, and optical imaging materials)

RN 617699-15-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[(2E)-3-[4-(4-benzoyl-1-piperazinyl)phenyl]-2-propenoate], polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate (9CI) (CA INDEX NAME)

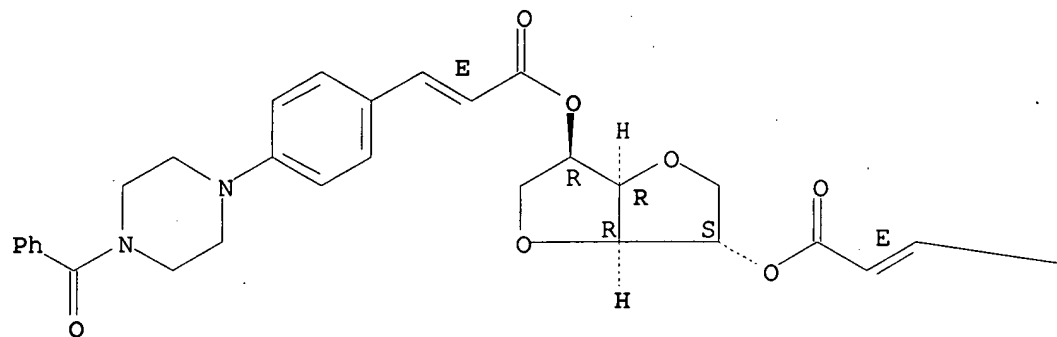
CM 1

CRN 617699-13-5

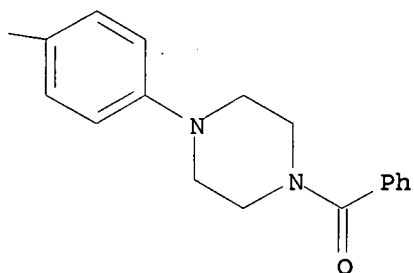
CMF C46 H46 N4 O8

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



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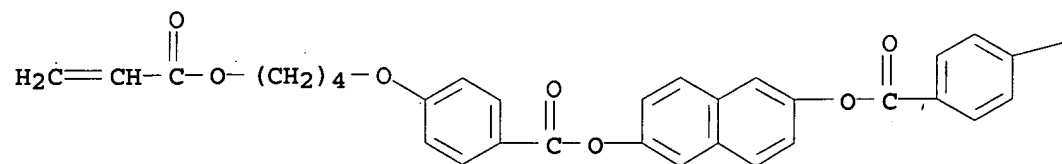


CM 2

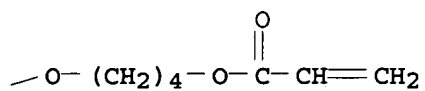
CRN 339588-79-3  
CMF C38 H36 O10



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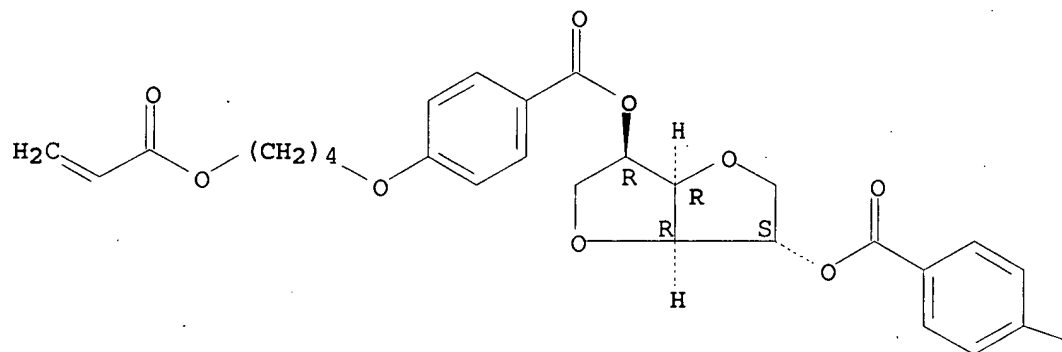
CM 3

CRN 250230-59-2

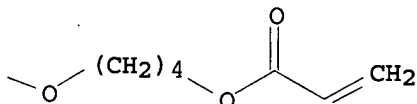
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



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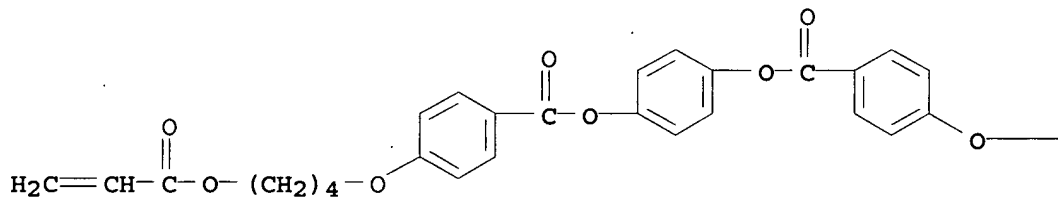


CM 4

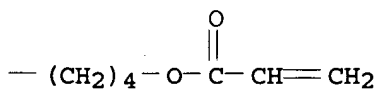
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IC ICM C07D493-04

ICS C09K019-38; C09K019-54; G02B005-20; G02B005-30; G02F001-13;  
G02F001-1335CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

Section cross-reference(s): 28, 73, 75

IT 617699-15-7P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)(circular polarizer films; manufacture of photoisomerizable and  
photosensitive optically active isosorbides as chiral agents for  
liquid crystal compns. for color filters, optical films, and  
optical imaging materials)

L14 ANSWER 13 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:841208 HCAPLUS

DOCUMENT NUMBER: 139:356105

TITLE: Photoisomerizable and photosensitive optically active isosorbides, their manufacturing method, liquid crystal compositions and applications, and method for changing and fixing helical structure of liquid crystals

INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi; Hayashi, Keiichiro; Kuroiwa, Ryuichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

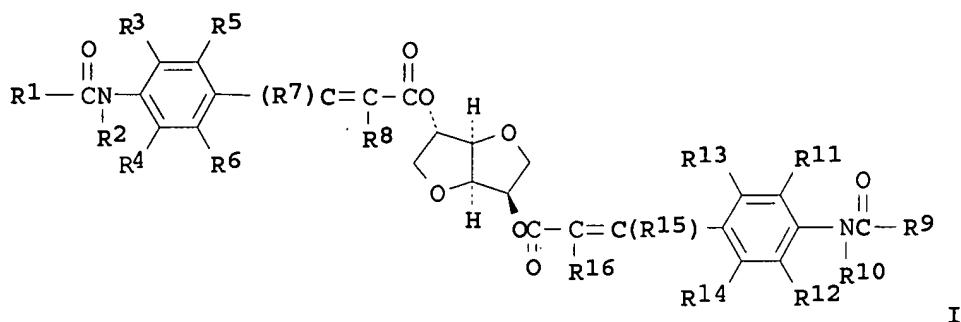
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

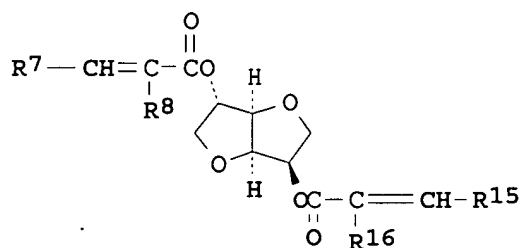
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003306490	A	20031028	JP 2002-116295	20020418
US 2004019228	A1	20040129	US 2003-418316	20030418
US 6902687	B2	20050607		
PRIORITY APPLN. INFO.:			JP 2002-116295	A 20020418
			JP 2002-119138	A 20020422

OTHER SOURCE(S): MARPAT 139:356105  
GI



I



II

AB The isosorbides I (R1, R9 = alkyl, alkenyl aryl, etc.; R2, R10 = H, alkyl, aryl; R3-R6, R11-R14 = H, halo, alkyl, alkoxy; R7, R8, R15 R16 = H, alkyl), manufactured from optically active isosorbides II (R7, R8, R15, R16 = same as above) and corresponding aryl halides, are used as chiral agents for liquid crystal compns. containing photoinitiators having sensitive wavelength ranges different from I. For changing and fixing helical structures of liquid crystals, the compns. are imagewisely irradiated at wavelength which I are sensitive to, followed by irradiating at wavelength which the photopolymn. initiators are sensitive to. The compns. are useful for color filters having high color saturation, optical films (e.g., optical compensation films, circular polarizer films) having high performance, and optical imaging media giving clear images. The color filters offering three-primary-color lights can be manufactured by one-step exposure with photomasks having imagewise varied light transmittance.

IT 618093-95-1P 618093-96-2P 618093-98-4P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(color filters; manufacture of photoisomerizable and photosensitive optically active isosorbides as chiral agents for liquid crystal compns. for color filters, optical films, and optical imaging materials)

RN 618093-95-1 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[(2E)-3-methoxy-3-[4-[(2-methylbenzoyl)amino]phenyl]-2-propenoate], polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate (9CI) (CA

INDEX NAME)

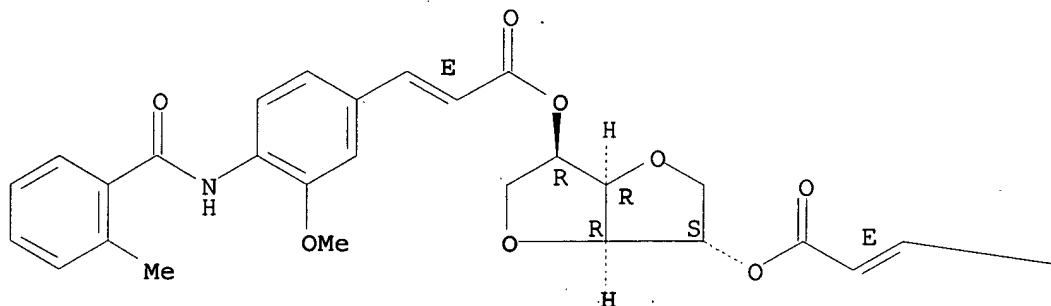
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CRN 618093-73-5

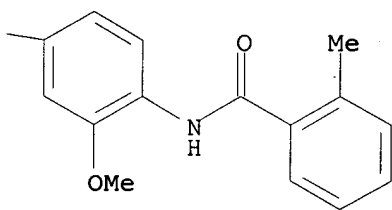
CMF C42 H40 N2 O10

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

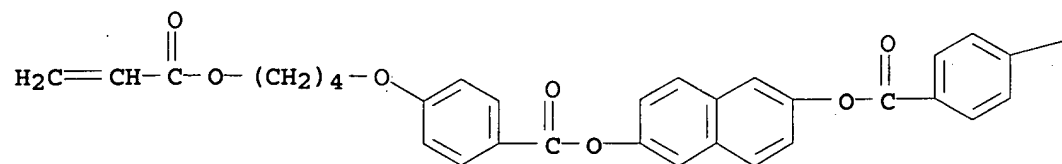


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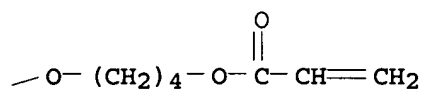
CRN 339588-79-3

CMF C38 H36 O10

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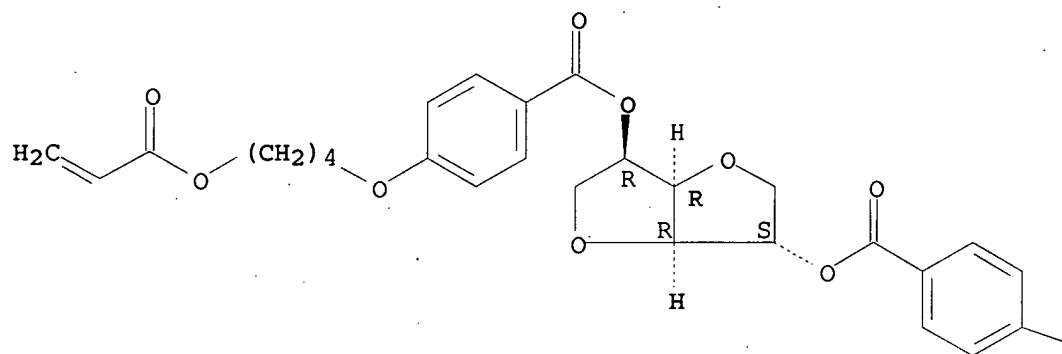
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CRN 250230-59-2

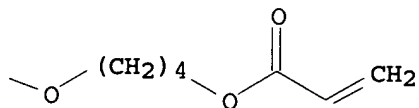
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

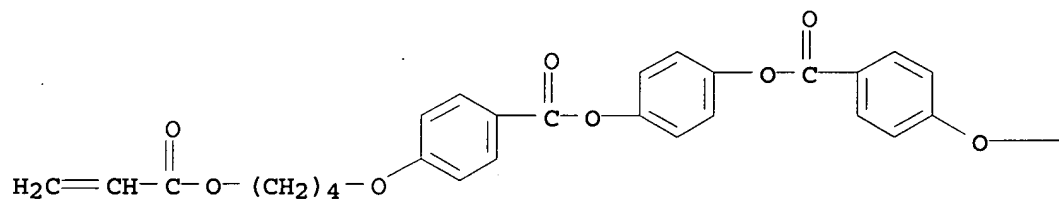


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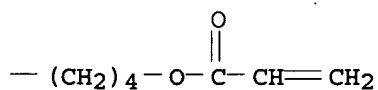
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



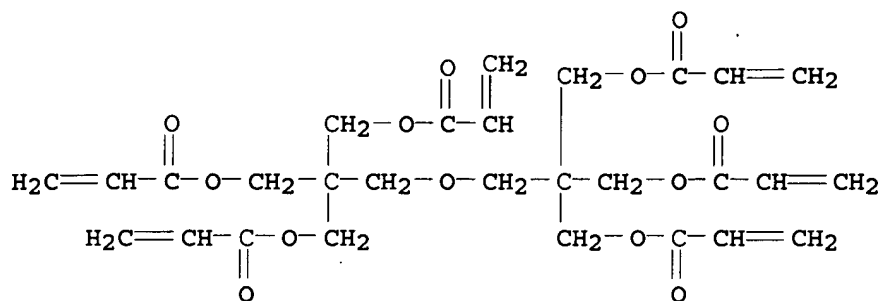
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



RN 618093-96-2 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[(2E)-3-[4-[[4-(benzoyloxy)benzoyl]amino]-2-methoxyphenyl]-2-propenoate], polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate (9CI) (CA INDEX NAME)

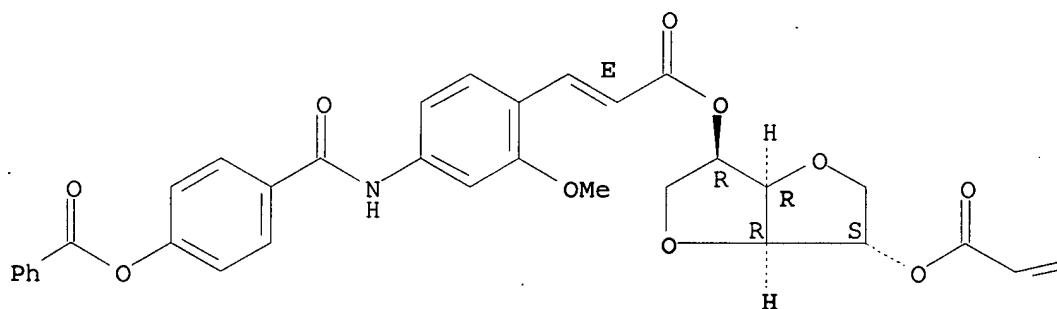
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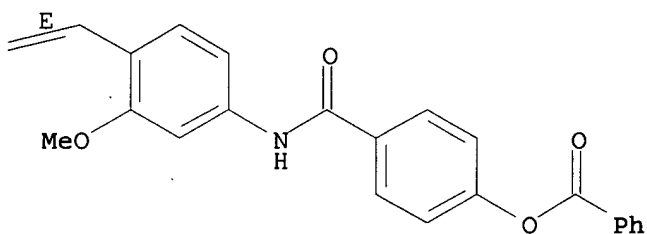
Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A





PAGE 1-B

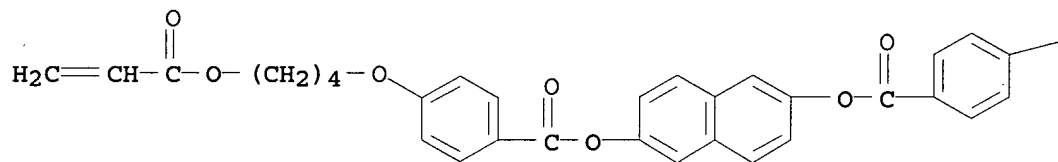


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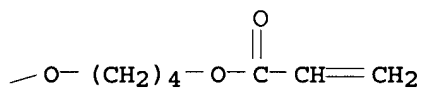
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CMF C38 H36 O10

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PAGE 1-B



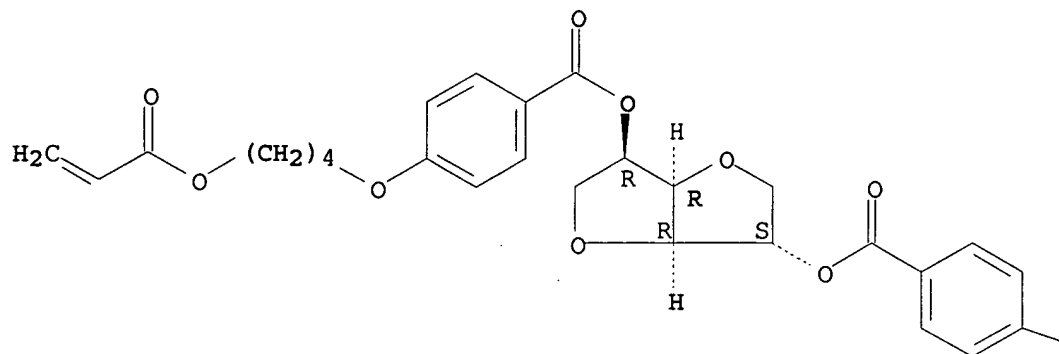
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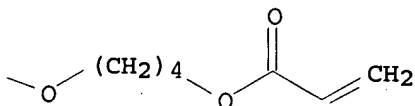
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

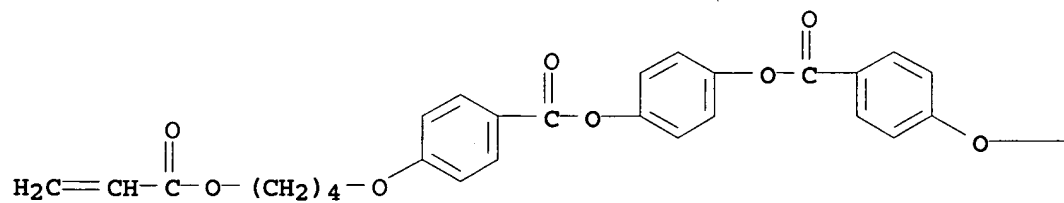


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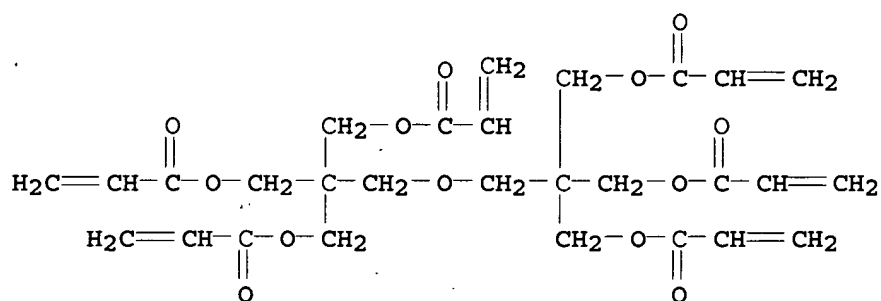
CMF C34 H34 O10

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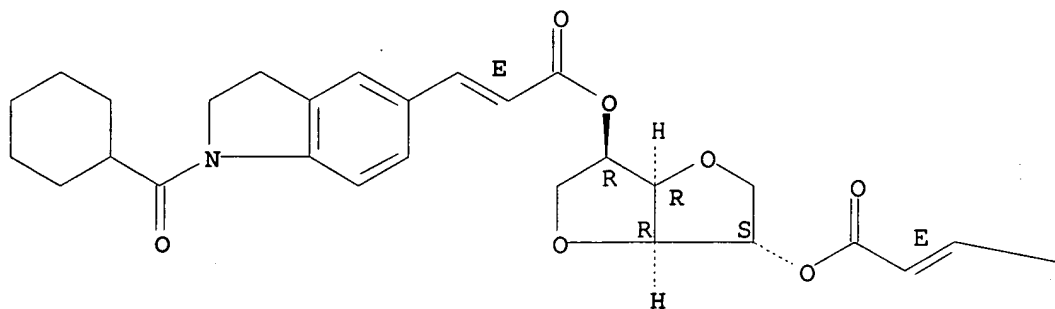
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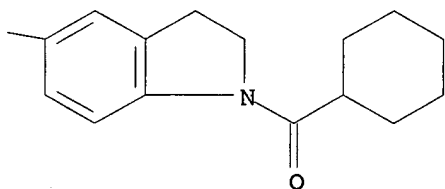
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22/12/2006

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PAGE 1-B

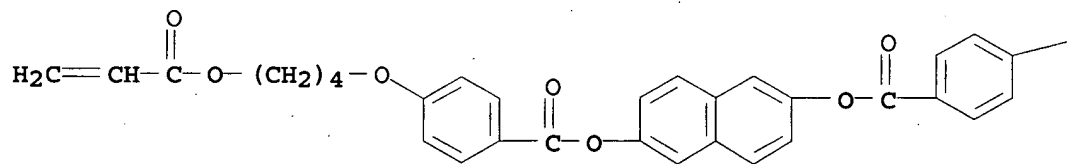


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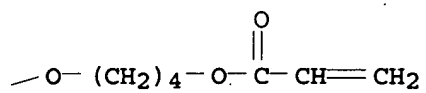
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CMF C38 H36 O10

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PAGE 1-B



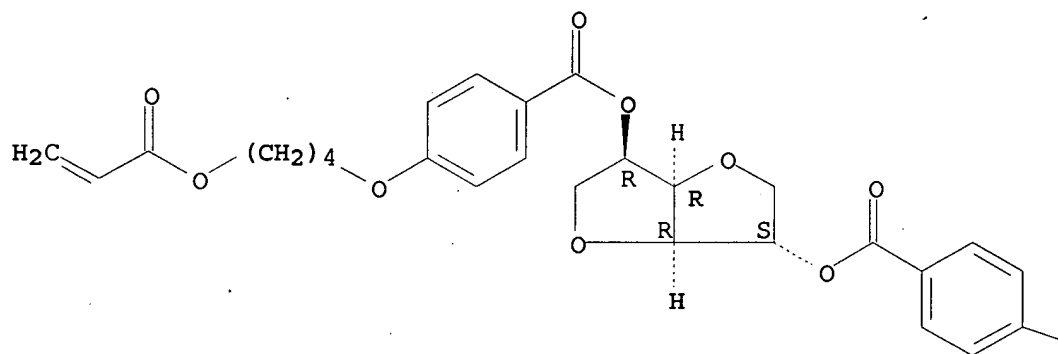
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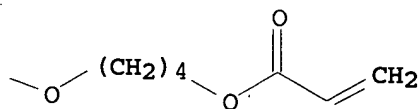
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

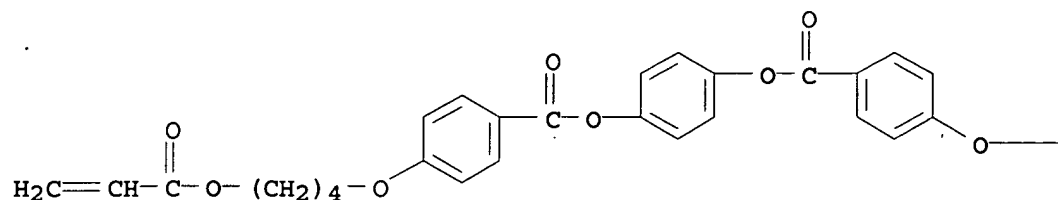


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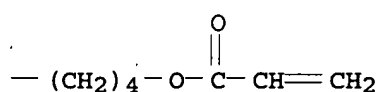
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CMF C34 H34 O10

PAGE 1-A



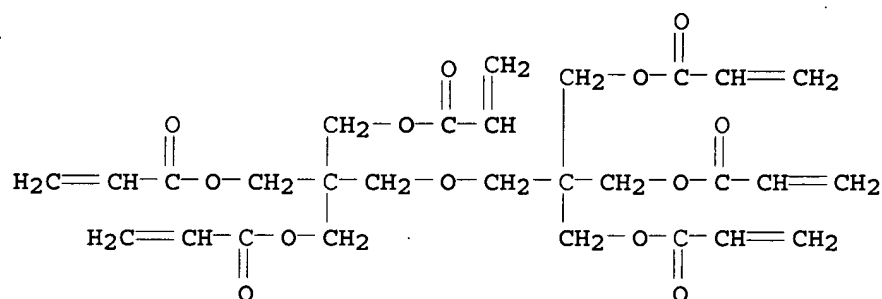
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CM 5

CRN 29570-58-9

CMF C28 H34 O13



IT 618093-94-0P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of photoisomerizable and photosensitive optically active isosorbides as chiral agents for liquid crystal compns. for color filters, optical films, and optical imaging materials)

RN 618093-94-0 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[(2E)-3-[4-(benzoylamino)-3-methoxyphenyl]-2-propenoate], polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate (9CI)  
(CA INDEX NAME)

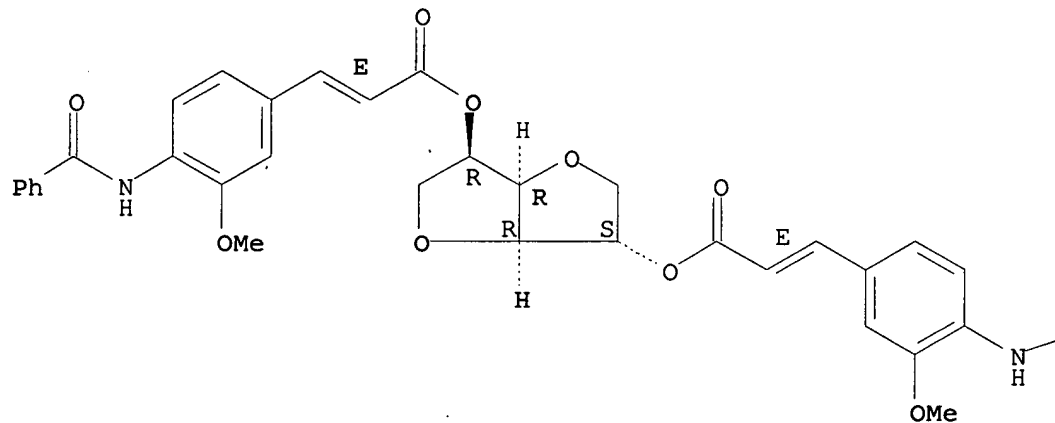
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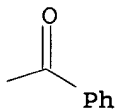
CMF C40 H36 N2 O10

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

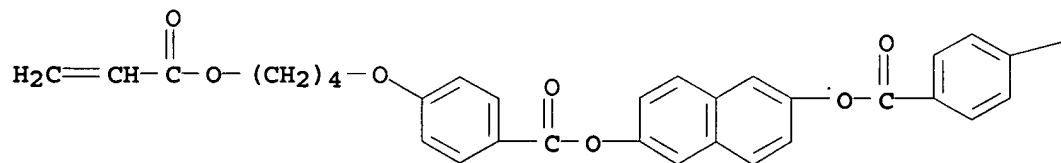


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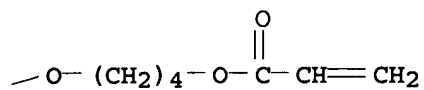
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CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



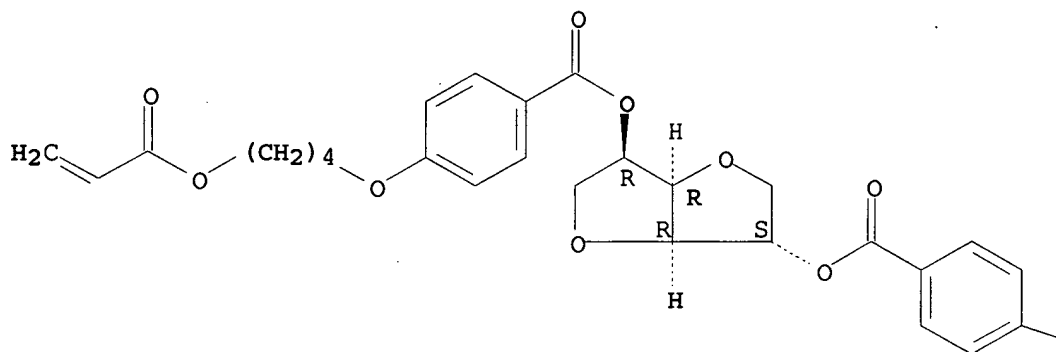
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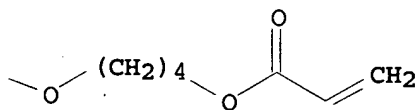
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



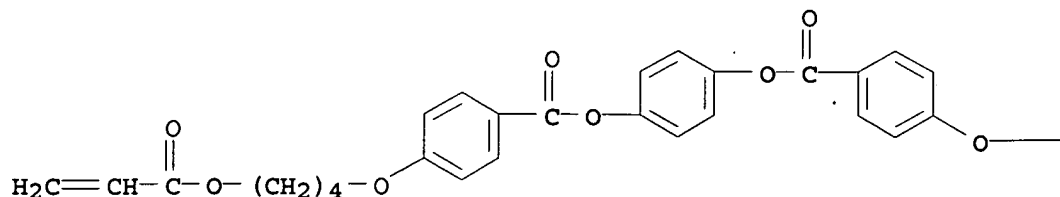
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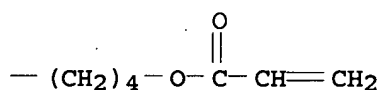
CMF C34 H34 O10



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PAGE 1-B



IC ICM C07D493-04  
ICS C09K019-38; C09K019-54; G02B005-20; G02B005-30; G02F001-13;  
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CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
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Section cross-reference(s): 28, 75

IT 618093-95-1P 618093-96-2P 618093-98-4P  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(color filters; manufacture of photoisomerizable and photosensitive  
optically active isosorbides as chiral agents for liquid crystal  
comps. for color filters, optical films, and optical imaging  
materials)

IT 618093-94-0P  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)  
(manufacture of photoisomerizable and photosensitive optically active  
isosorbides as chiral agents for liquid crystal comps. for color  
filters, optical films, and optical imaging materials)

L14 ANSWER 14 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:610554 HCAPLUS  
DOCUMENT NUMBER: 139:165925  
TITLE: Aqueous mini-emulsions which are stable in  
storage and based on cholesteric mixtures  
INVENTOR(S): Leyrer, Reinhold; Ramkumar, Dhruva; Schoepke,  
Holger  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
SOURCE: PCT Int. Appl., 39 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2003064559

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PRIORITY APPLN. INFO.:

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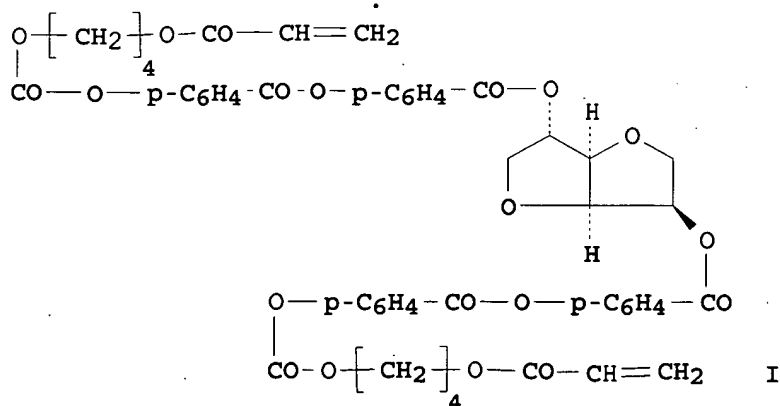
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WO 2003-EP944

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200301  
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GI



AB Stable, aqueous mini-emulsions, useful for coating and printing, contain (a)  $\geq 1$  achiral, nematic monomer selected from polyfunctional monomers, monofunctional monomers, and their mixts., (b)  $\geq 1$  achiral, nematic nonpolymerizable compound, and (c)  $\geq 1$  chiral di- or monofunctional monomer in the dispersed phase. A typical mini-emulsion contained 96.2% combination of 2,5-bis[4-(4-acryloyloxybutoxycarbonyloxy)benzoyloxy]toluene, 5-[4-(4-acryloyloxybutoxycarbonyloxy)benzoyloxy]-2-[4-(butoxycarbonyloxy)benzoyloxy]toluene, 2-[4-(4-acryloyloxybutoxycarbonyloxy)benzoyloxy]-5-[4-(butoxycarbonyloxy)benzoyloxy]toluene, 4-acryloyloxybutyl 4-[4-(4-acryloyloxybutoxycarbonyloxy)benzoyloxy]benzoate, and 2,5-bis[4-(butoxycarbonyloxy)benzoyloxy]toluene, and 3.8% I in the dispersed phase.

IT 573998-08-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymerizable aqueous mini-emulsions which are stable in storage and based on cholesteric mixts. for effect coatings and inks)

RN 573998-08-0 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]phenyl 4-[(butoxycarbonyl)oxy]benzoate, 3-methyl-4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]phenyl 4-[(butoxycarbonyl)oxy]benzoate, 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] and 4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]phenyl 4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate (9CI) (CA INDEX NAME)

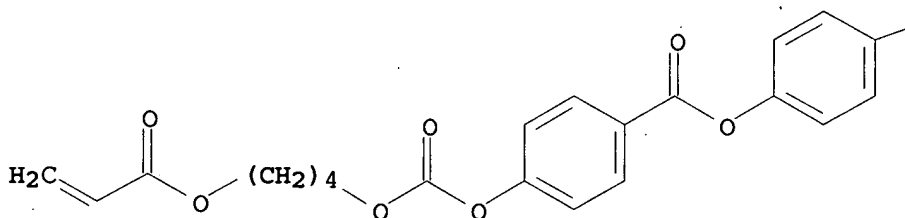
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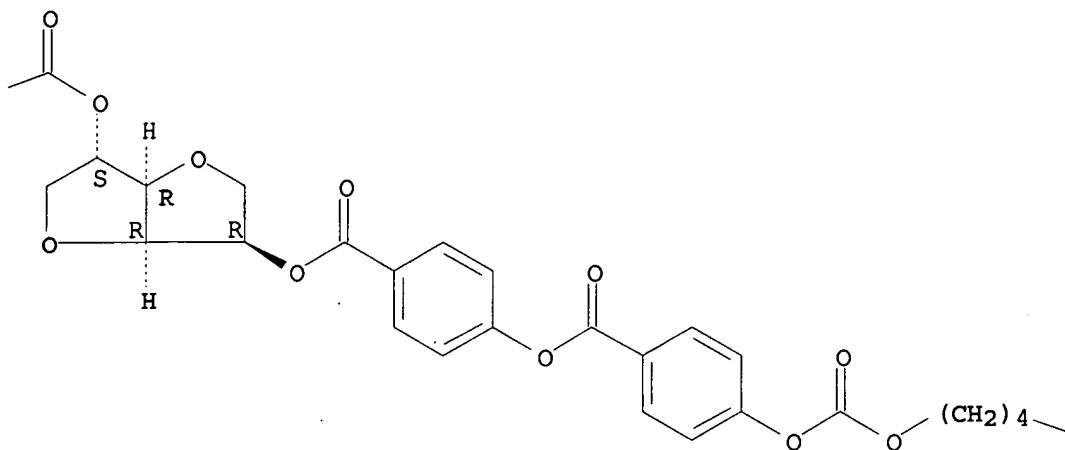
CMF C50 H46 O20

Absolute stereochemistry.

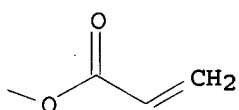
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PAGE 1-B



PAGE 1-C

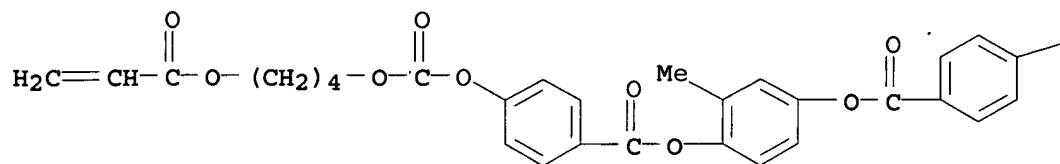


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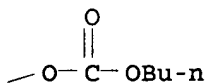
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CMF C34 H34 O12

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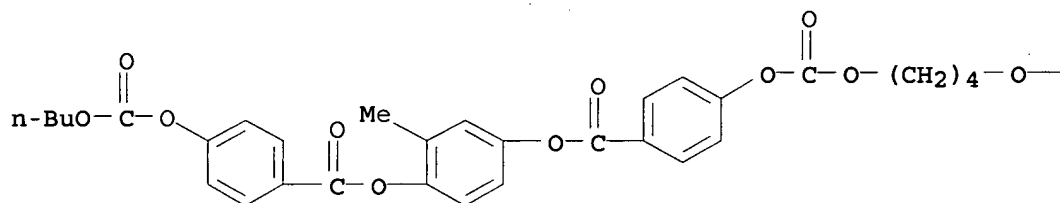


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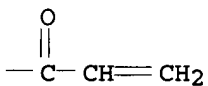
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CMF C34 H34 O12

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PAGE 1-B

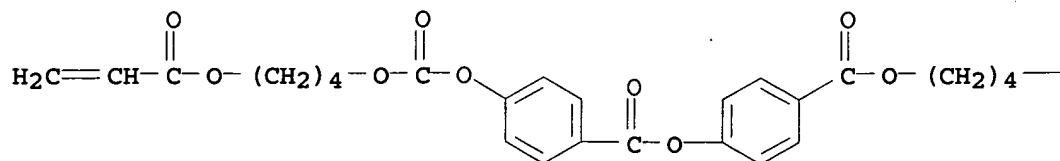


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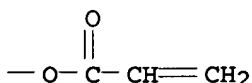
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CMF C29 H30 O11

PAGE 1-A



PAGE 1-B

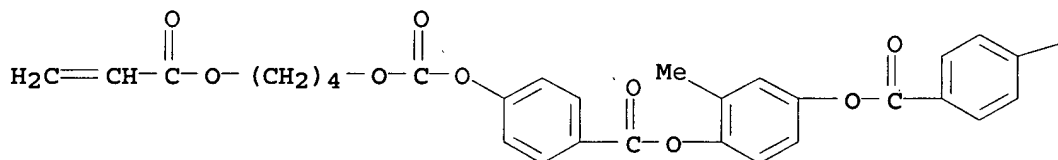


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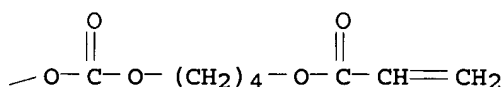
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CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM C09K019-46

ICS C09K019-58; C09K019-02; C09K019-04

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 75

IT 573998-08-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(polymerizable aqueous mini-emulsions which are stable in storage and  
based on cholesteric mixts. for effect coatings and inks)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L14 ANSWER 15 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:591448 HCAPLUS

DOCUMENT NUMBER: 139:140735  
 TITLE: Optical film, method for manufacturing the same,  
 and phase difference film and polarizing plate  
 using the same  
 INVENTOR(S): Yamaoka, Takashi; Yano, Shuuji; Adachi, Junichi;  
 Kawai, Masayuki; Wasai, Kanako; Murakami, Nao  
 PATENT ASSIGNEE(S): Nitto Denko Corporation, Japan  
 SOURCE: PCT Int. Appl., 65 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

APPLI CONT

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WO 2003062873	A1	20030731	WO 2003-JP507	20030122
W: CN, KR, US JP 2003287622	A	20031010	JP 2003-10101	20030117
JP 2003287623	A	20031010	JP 2003-10102	20030117
CN 1623106	A	20050601	CN 2003-802639	20030122
CN 1623108	A	20050601	CN 2003-802663	20030122
US 2005074564	A1	20050407	US 2004-499963	20040624
PRIORITY APPLN. INFO.:			JP 2002-14528	A 20020123
			WO 2003-JP507	W 20030122

AB A method for preparing an optical film, which comprises applying and developing an application liquid mixture containing a liquid crystal monomer, a chiral agent and a polymerization initiator on an orientation substrate, subjecting the resultant developed layer to a heat treatment, to orient the monomer to a cholesteric structure, and then subjecting the developed layer to a polymerization treatment, to polymerize the oriented liquid crystal monomer, thereby forming an optical film exhibiting a selective reflection wave length of 100 to 320 nm. An optical film prepared by the above method is reduced in the coloring due to selective reflection.

IT 252009-99-7P 569346-30-1P

RL: DEV (Device component use); PNU (Preparation, unclassified);

PREP (Preparation); USES (Uses)

(phase retarder and polarizer films prepared by polymerizable liquid crystal and chiral agent for optical display device)

RN 252009-99-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

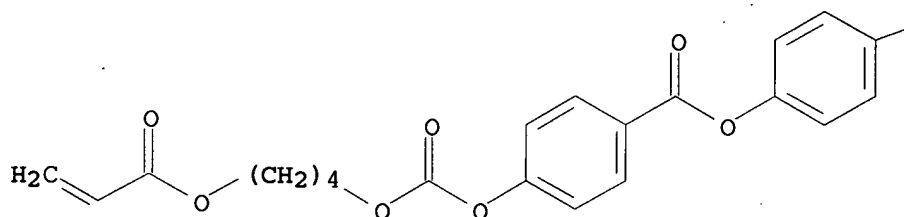
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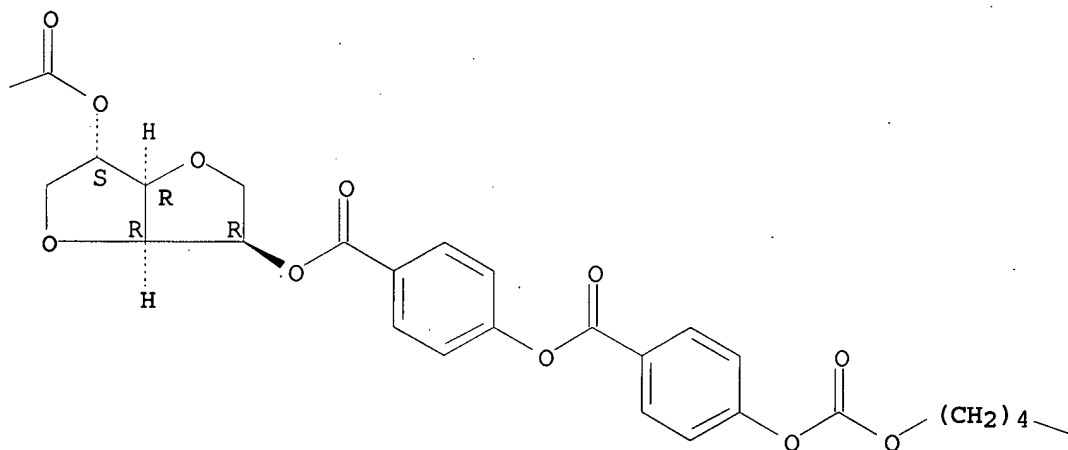
CMF C50 H46 O20

Absolute stereochemistry.

PAGE 1-A

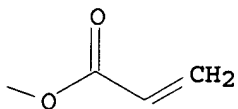


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PAGE 1-C

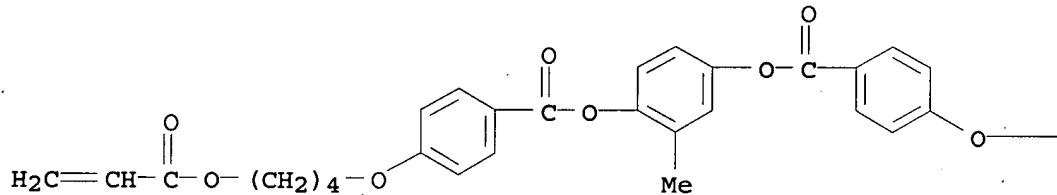


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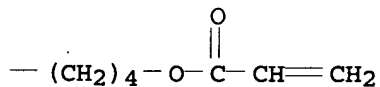
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CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



RN 569346-30-1 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

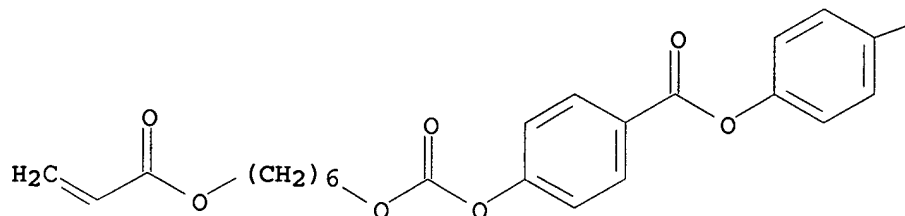
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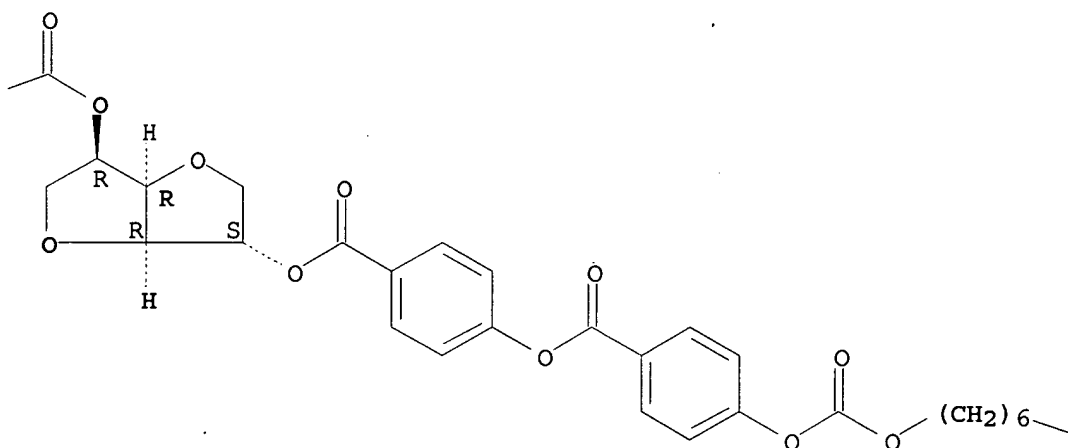
CMF C54 H54 O20

Absolute stereochemistry.

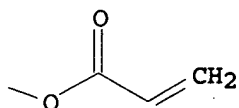
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PAGE 1-B



PAGE 1-C

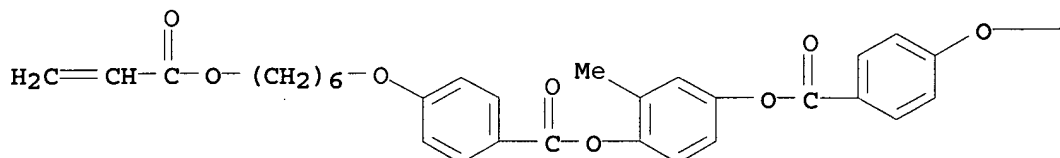


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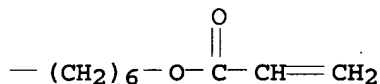
CRN 125248-71-7

CMF C39 H44 O10

PAGE 1-A



PAGE 1-B



IC ICM G02B005-30  
ICS G02F001-1336; G02F001-1335  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 74  
IT 252009-99-7P 569346-30-1P  
RL: DEV (Device component use); PNU (Preparation, unclassified);  
PREP (Preparation); USES (Uses)  
(phase retarder and polarizer films prepared by polymerizable liquid crystal and chiral agent for optical display device)  
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:438006 HCAPLUS  
DOCUMENT NUMBER: 139:215056  
TITLE: Cholesteric networks based on lyotropic mixtures  
AUTHOR(S): Schmitt, Gerold; Giesa, Reiner; Schmidt, Hans-Werner  
CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuth Center for Colloids and Interfaces (BZKG), Universitat Bayreuth, Bayreuth, 95440, Germany  
SOURCE: ChemPhysChem (2003), 4(5), 505-508  
CODEN: CPCHFT; ISSN: 1439-4235  
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Stable lyotropic cholesteric mixts. containing up to 35 weight% of a reactive solvent were prepared by diluting a binary thermotropic system with divinylbenzene. After photocrosslinking of the oriented mixts., anisotropic networks were obtained and characterized. The successful incorporation of inexpensive diluents without destroying

the cholesteric phase facilitated the tech. application of these systems as organic effect pigments for automobiles and other purposes.

IT 590939-53-0 590939-61-0 590939-66-5

590939-72-3

RL: PRP (Properties)

(cholesteric networks based on lyotropic mixts.)

RN 590939-53-0 HCAPLUS

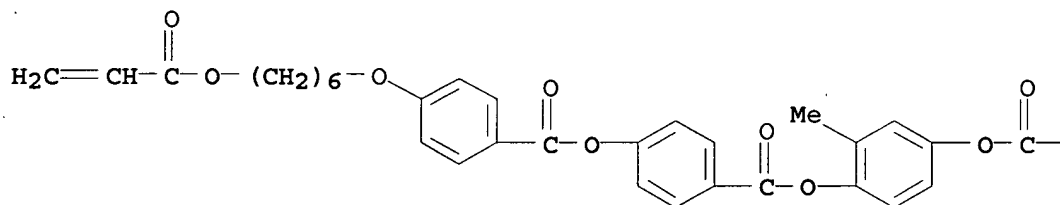
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[4-[4-[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]benzoate] (9CI) (CA INDEX NAME)

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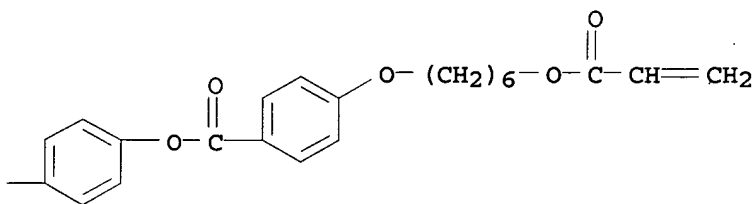
CRN 384372-05-8

CMF C53 H52 O14

PAGE 1-A



PAGE 1-B



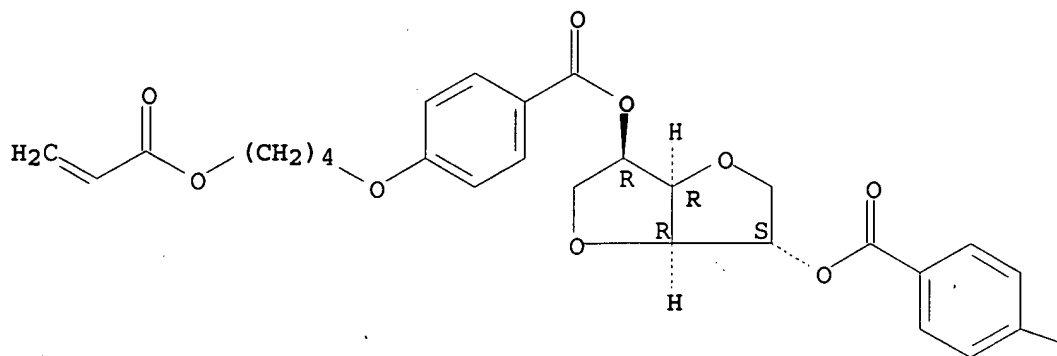
CM 2

CRN 250230-59-2

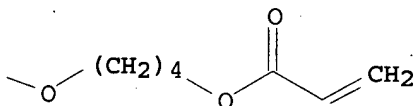
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



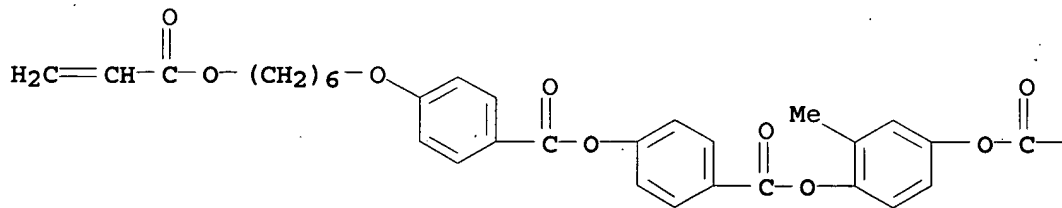
RN 590939-61-0 HCAPLUS  
 CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with diethenylbenzene and 2-methyl-1,4-phenylene bis[4-[4-[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]benzoate] (9CI) (CA INDEX NAME)

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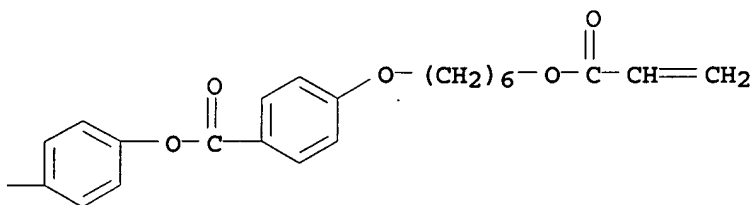
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CMF C53 H52 O14

PAGE 1-A



PAGE 1-B



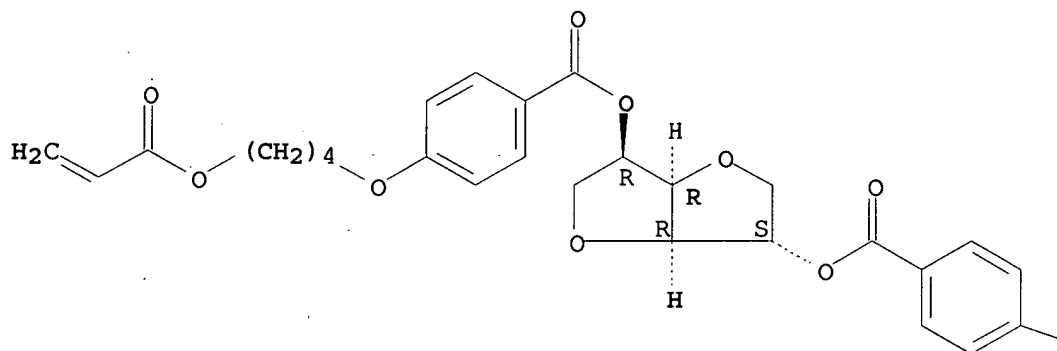
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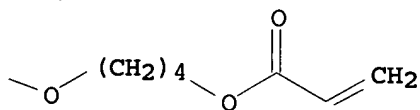
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A

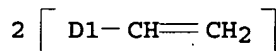


PAGE 1-B



CM 3

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 CMF C10 H10  
 CCI IDS

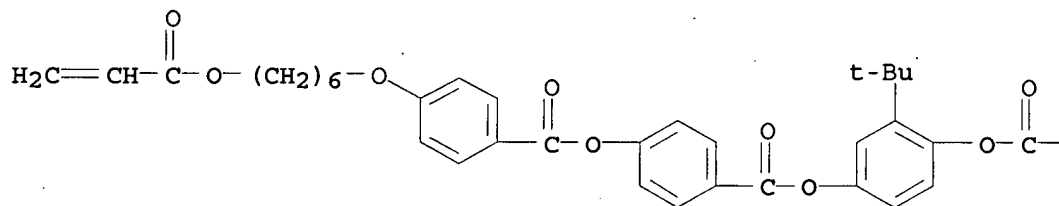


RN 590939-66-5 HCAPLUS  
 CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-(1,1-dimethylethyl)-1,4-phenylene bis[4-[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]benzoate] (9CI) (CA INDEX NAME)

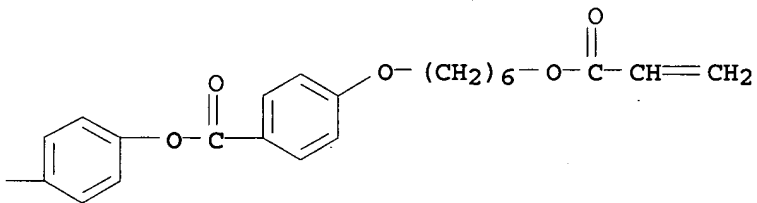
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CRN 384372-07-0  
 CMF C56 H58 O14

PAGE 1-A



PAGE 1-B

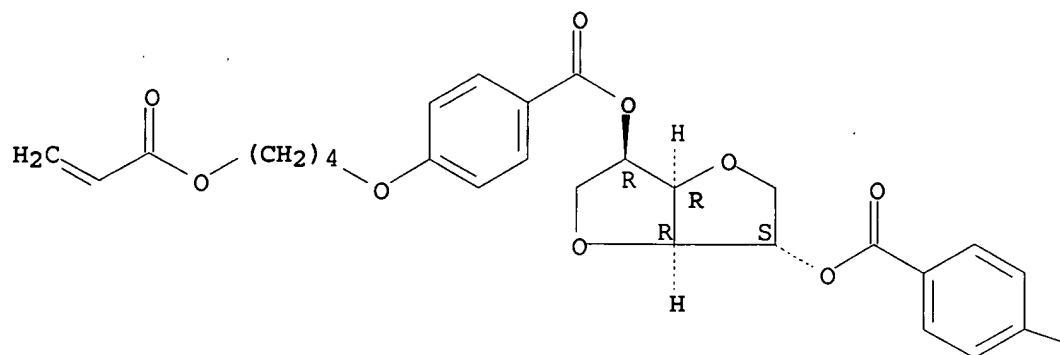


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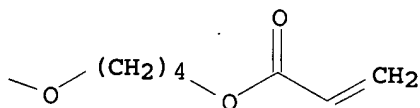
CRN 250230-59-2  
 CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



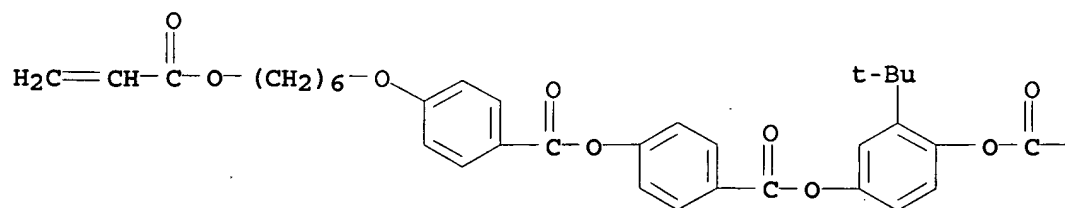
RN 590939-72-3 HCAPLUS  
 CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with diethenylbenzene and 2-(1,1-dimethylethyl)-1,4-phenylene bis[4-[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]benzoate] (9CI) (CA INDEX NAME)

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CRN 384372-07-0

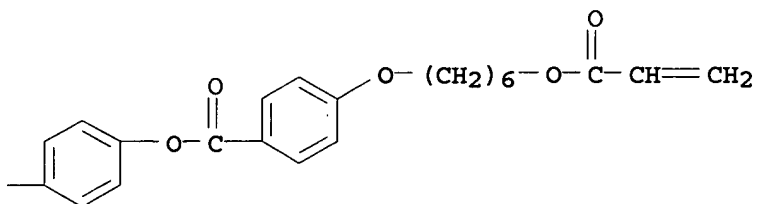
CMF C56 H58 O14

PAGE 1-A





PAGE 1-B



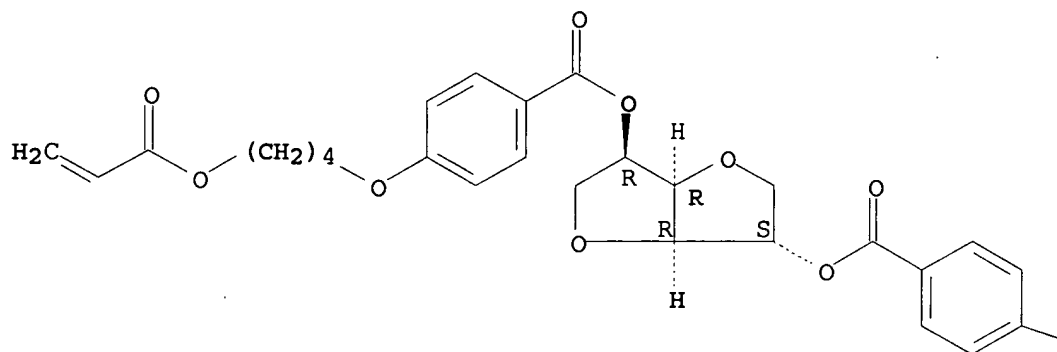
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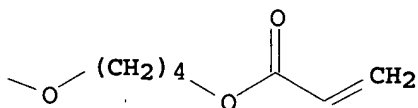
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



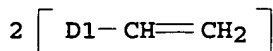
PAGE 1-B



CM 3

CRN 1321-74-0

CMF C10 H10  
CCI IDS



CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 75

IT 590939-53-0 590939-61-0 590939-66-5  
590939-72-3

RL: PRP (Properties)

(cholesteric networks based on lyotropic mixts.)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L14 ANSWER 17 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:377158 HCAPLUS

DOCUMENT NUMBER: 138:393145

TITLE: Optical device manufacturing method

INVENTOR(S): Kashima, Keiji

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003040788	A1	20030515	WO 2002-JP11621	20021107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003207644	A	20030725	JP 2002-311697	20021025
CN 1657985	A	20050824	CN 2005-10050975	20021107

TW 591272	B	20040611	TW 2002-91132944	200211 08
US 2004056991	A1	20040325	US 2003-250780	200307 09
PRIORITY APPLN. INFO.:			JP 2001-345453	A 200111 09
			JP 2002-311697	A 200210 25
			WO 2002-JP11621	W 200211 07

AB The invention relates to a method for manufacturing an optical device such as an optical phase-shifter in which a polymerizable liquid crystal material is cured to keep its liquid crystal regularity and the material is excellent in adhesion to the base. The method comprises the steps of preparing a base having an aligning ability, depositing a liquid crystal layer forming composition containing at least a polymerizable liquid crystal material on the base to form a liquid crystal layer having a predetd. liquid crystal regularity, forming an optical functional layer by irradiating the liquid crystal layer with radioactive radiation to turn the liquid crystal layer into the optical functional layer, and heat-treating the optical functional layer above the temperature of the isotropic layer before the polymerization (crosslinking) of the liquid crystal layer. The device such as a optical film shows good contact with a substrate.

IT 526199-67-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(optical phase-shifter)

RN 526199-67-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy]-, ester with 1,4:3,6-dianhydro-D-glucitol bis[4-[[4-(carboxyoxyl)benzoyl]oxy]benzoate] (2:1), polymer with  $\alpha,\alpha'$ -[(2-methyl-1,4-phenylene)bis(oxycarbonyl-4,1-phenyleneoxycarbonyl)]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

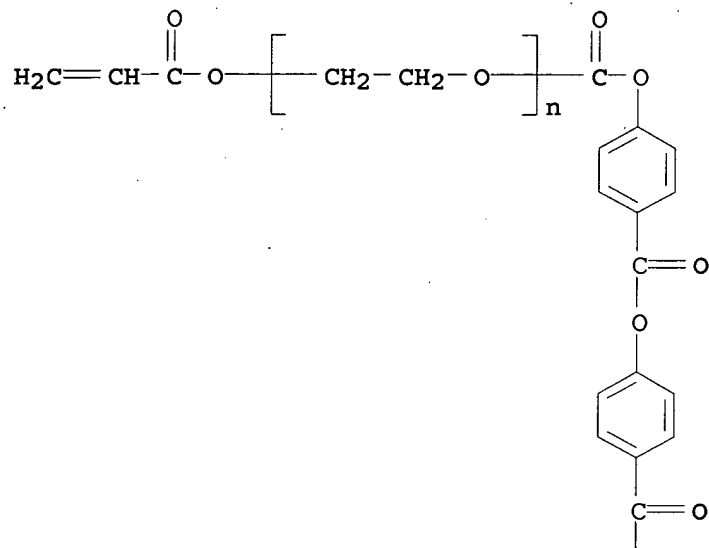
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CRN 526199-66-6

CMF (C2 H4 O)n (C2 H4 O)n C42 H30 O18

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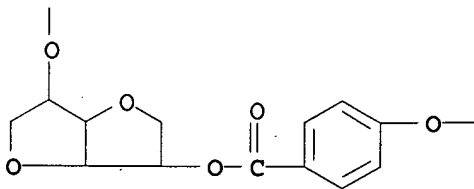
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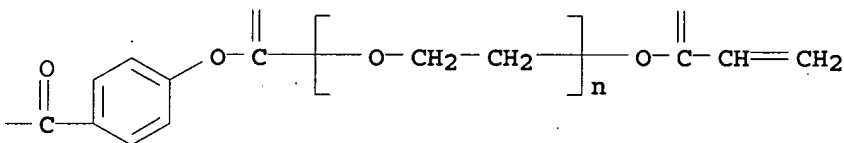
PAGE 1-B



PAGE 2-A



PAGE 2-B



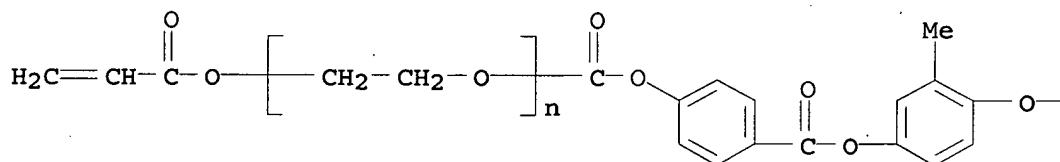
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CRN 526199-65-5

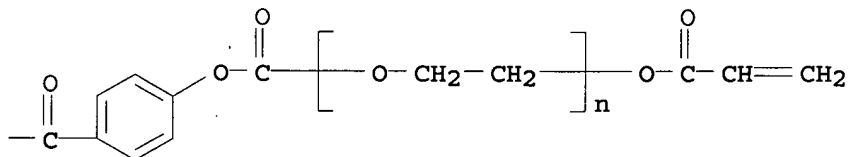
CMF (C2 H4 O)n (C2 H4 O)n C29 H20 O12

CCI PMS

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IC ICM G02B005-30

ICS G02F001-1336

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 73

IT 526199-67-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(optical phase-shifter)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L14 ANSWER 18 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:377157 HCAPLUS  
 DOCUMENT NUMBER: 138:376174  
 TITLE: Optical device  
 INVENTOR(S): Kashima, Keiji  
 PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003040787	A1	20030515	WO 2002-JP11619	20021107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003207642	A	20030725	JP 2002-291351	20021003
CN 1651941	A	20050810	CN 2005-10004150	20021107
US 2004130670	A1	20040708	US 2003-250779	20030709
US 7068345	B2	20060627		
US 2006033861	A1	20060216	US 2005-242853	20051005
PRIORITY APPLN. INFO.:				
			JP 2001-345451	A 20011109
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			US 2003-250779	A3 20030709

IT 252010-00-7

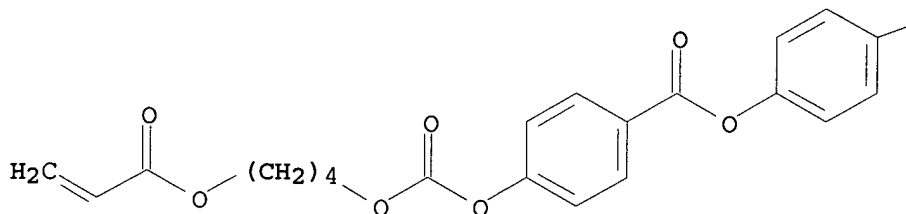
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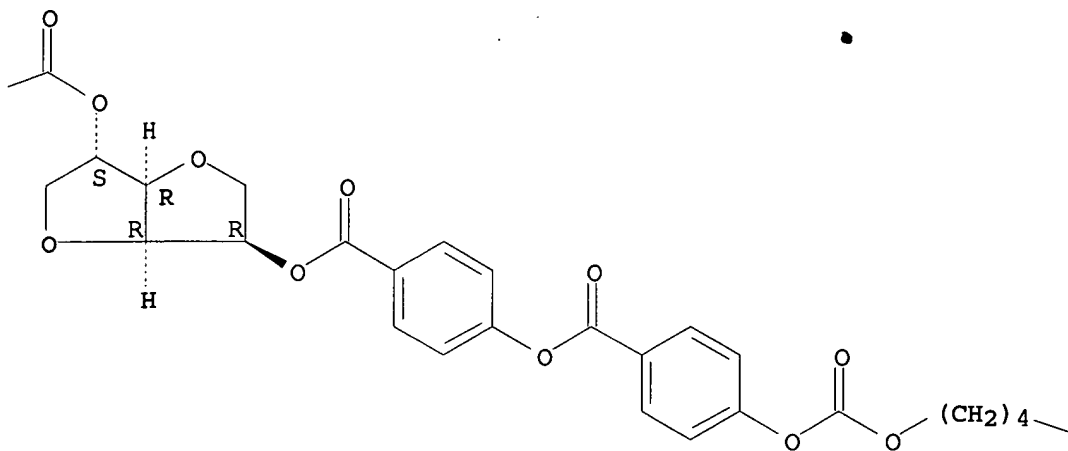
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CMF C50 H46 O20

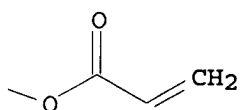
PAGE 1-A



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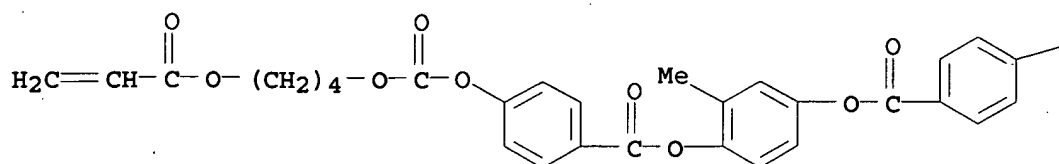
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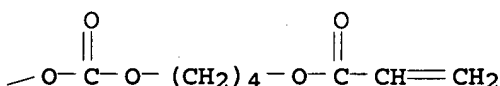
CMF C37 H36 O14



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PAGE 1-B



IC ICM G02B005-30  
ICS G02F001-1336  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 74  
IT 223572-88-1 252010-00-7  
RL: DEV (Device component use); USES (Uses)  
(optical device)  
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 19 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:373792 HCAPLUS  
DOCUMENT NUMBER: 138:373848  
TITLE: Cosmetic or dermatological sunscreen composition with infrared light reflecting polymeric liquid crystal pigments  
INVENTOR(S): Parker, Robert; Heidenfelder, Thomas; Wagenblast, Gerhard  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
SOURCE: Eur. Pat. Appl., 47 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1310238	A2	20030514	EP 2002-25192	20021111
EP 1310238	A3	20040102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
DE 10155542	A1	20030522	DE 2001-10155542	20011112

US 2003215405	A1	20031120	US 2002-289334	20021107
JP 2003183145	A	20030703	JP 2002-327175	20021111
CN 1418614	A	20030521	CN 2002-149283	20021112
RITY APPLN. INFO.:			DE 2001-10155542	A 20011112

AB The invention concerns sunscreens that contain at least one cholesteric liquid crystal that reflects at 750 nm-2500 nm, a 280-449 nm UV filter and a carrier; the compns. decrease the heat formation on the body at least by 20%. Thus an IR pigment was prepared by mixing an achiral nematic monomer with right- and left-handed chiral dopant monomers, layering the mixts. and photopolymn. The obtained pigment was used in a lip care stick as a 8 weight/weight% component. Other ingredients were (weight/weight%): glycerin 10.00; titanium dioxide 10.00; 2-cyano-3,3-diphenylacrylic acid ethylhexylester 3.00; 4-tert-butyl-4'-methoxy-dibenzoyl methane 2.00; octyl methoxycinnamate 8.00; zinc oxide 5.00; castor oil 4.00; pentaerythrithyl stearate/caprate/caprylate/adipate 4.00; glyceryl stearate 3.00; beeswax 2.00; wax 2.00; quaternium-18 bentonite 2.00; PEG-45-dodecyl glycol copolymer 2.00; eucerinum anhydricum to 100.

IT 252010-00-7P 522638-15-9P  
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(cosmetic or dermatol. sunscreen composition with IR light reflecting  
polymeric liquid crystal pigments)

RN 252010-00-7 HCAPPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

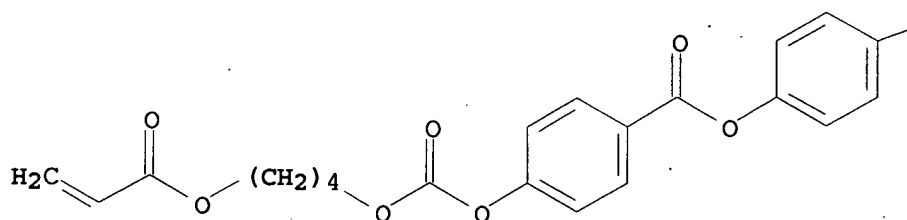
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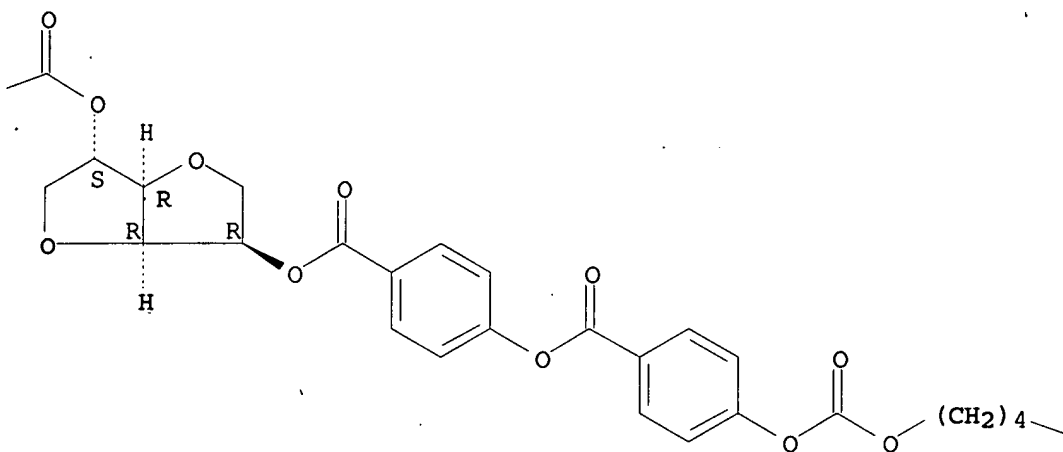
CMF C50 H46 O20

Absolute stereochemistry.

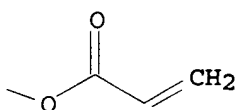
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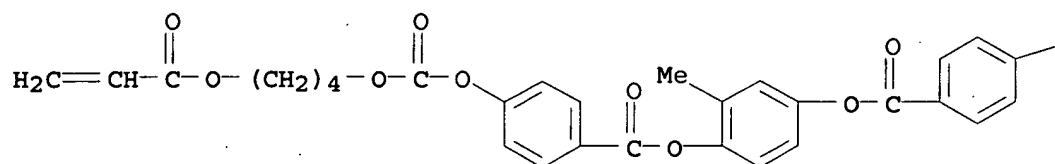
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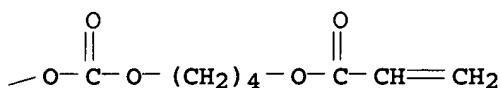
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CRN 187585-64-4  
CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



RN 522638-15-9 HCAPLUS

CN D-Mannitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

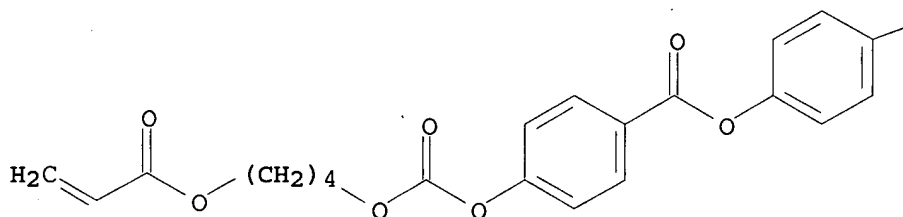
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CRN 522638-14-8

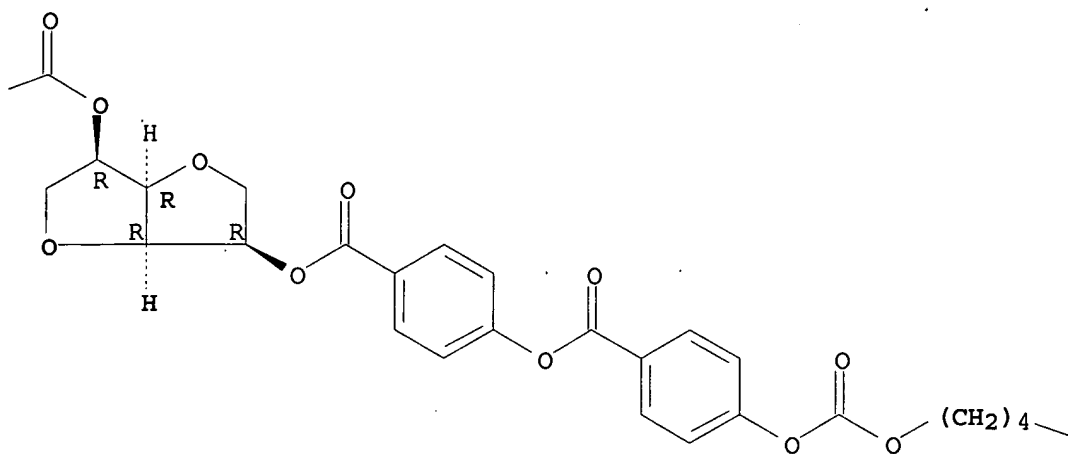
CMF C50 H46 O20

Absolute stereochemistry.

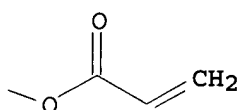
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PAGE 1-B



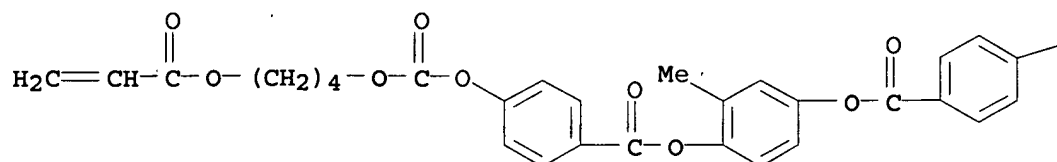
PAGE 1-C



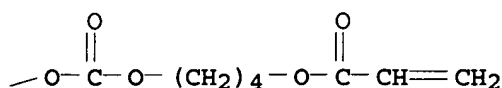
CM 2

CRN 187585-64-4  
CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM A61K007-42  
 CC 62-4 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 41, 73  
 IT 252010-00-7P 522638-15-9P  
 RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (cosmetic or dermatol. sunscreen composition with IR light reflecting  
 polymeric liquid crystal pigments)

L14 ANSWER 20 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:165376 HCAPLUS  
 DOCUMENT NUMBER: 138:196013  
 TITLE: Impact-resistant plastic color filter substrates  
 for liquid crystal displays with high color  
 purity  
 INVENTOR(S): Arakawa, Kohei; Ichihashi, Mitsuyoshi; Kamata,  
 Akira  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003066422	A	20030305	JP 2001-251249	200108 22
PRIORITY APPLN. INFO.:			JP 2001-251249	200108 22

AB The substrates, especially suited for LCD cells for handy-size apparatus such as cellular phones, comprise plastic films having gas-barrier layers and color filters of patterned cholesteric liquid crystalline polymer layers having different helical pitches in different color segments. The films satisfy (i)  $Re(550) \leq 10$  or (ii)  $Re(450) < Re(550) <$

Re(650) and  $100 \leq \text{Re}(550) \leq 160$  [Re(450), Re(550),  
Re(650) = retardation (nm) at 450, 550, and 650 nm].

IT 499139-03-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(color filter layers; plastic color filter substrates having patterned cholesteric liquid crystalline polymer layers for LCD)

RN 499139-03-6 HCAPLUS

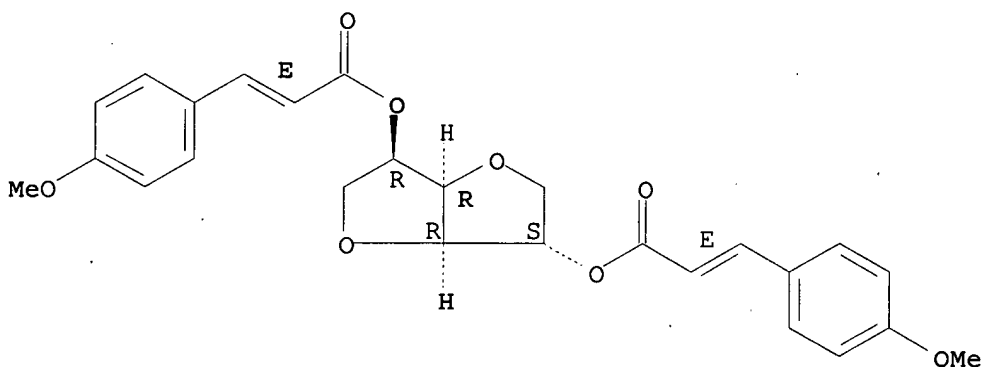
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[(2E)-3-(4-methoxyphenyl)-2-propenoate], polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
(CA INDEX NAME)

CM 1

CRN 386243-97-6

CMF C26 H26 O8

Absolute stereochemistry.  
Double bond geometry as shown.

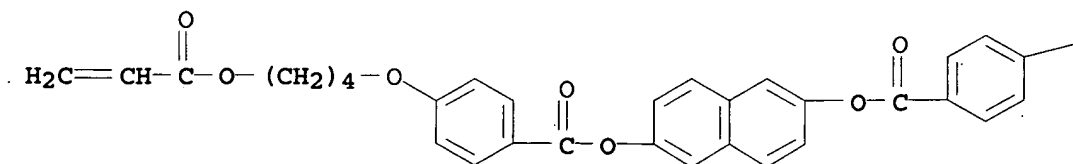


CM 2

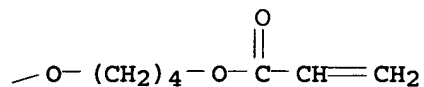
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



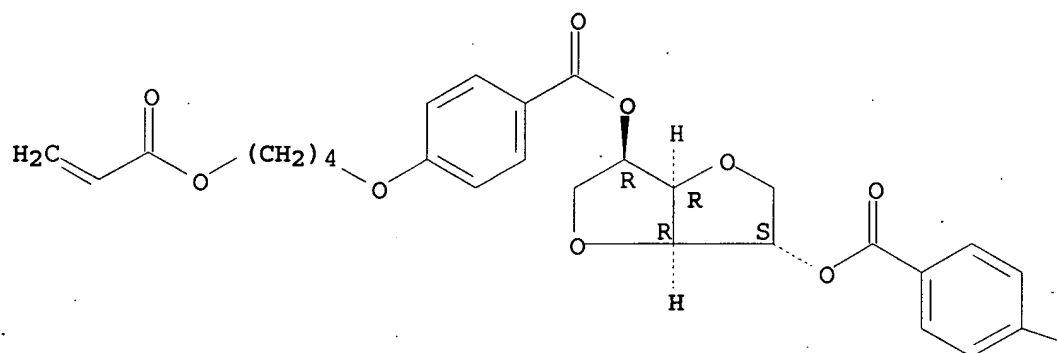
CM 3

CRN 250230-59-2

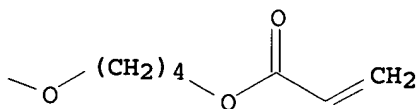
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



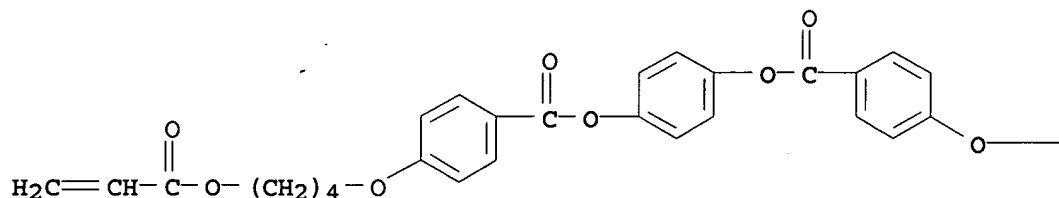
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CRN 132694-65-6

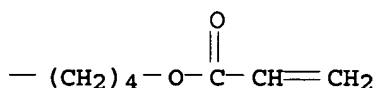
CMF C34 H34 O10



PAGE 1-A



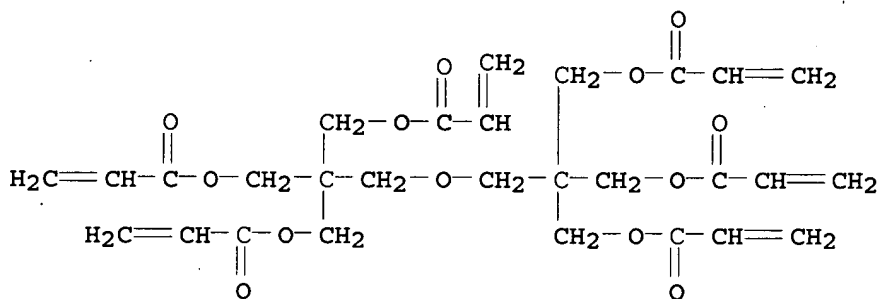
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02F001-1333

ICS C08F002-44; G02F001-1335; G03F007-004; G03F007-20

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 75

IT 499139-03-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(color filter layers; plastic color filter substrates having patterned cholesteric liquid crystalline polymer layers for LCD)

L14 ANSWER 21 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:165058 HCAPLUS

DOCUMENT NUMBER: 138:205856

TITLE: Photopolymerizable compounds, their use in liquid-crystalline compositions, and crosslinked polymers of the compositions

INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi;

PATENT ASSIGNEE(S): Hayashi, Keiichiro  
 SOURCE: Fuji Photo Film Co., Ltd., Japan  
 Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003064032	A	20030305	JP 2001-251291	20010822
PRIORITY APPLN. INFO.:				JP 2001-251291
				20010822

OTHER SOURCE(S): MARPAT 138:205856

AB The compds. giving optically anisotropic films with good mech. strength, hardness, etc., and having good compatibility to other polymerizable liquid crystalline compds., are represented by (P1L1O2C)(P2L2O2C)C:CR1-p-C6H4-aX1aZ1AZ2-p-C6H4-bX2bCR2:C(CO2L3P3)(CO2L4P4) (I; P1-P4 = polymerizable group, H, halo, OH, NHR3; R3 = H, alkyl; ≥1 of P1-P4 = polymerizable group; L1-L4 = alkylene, alkenylene, aralkylene, single bond; R1, R2 = H, alkyl, aryl; X1, X2 = halo, alkyl, alkoxy; Z1, Z2 = single bond, CO2, OCO, CONH, NHCO, CH:CH, C.tplbond.C; a, b = 0, 1, 2; A = divalent aromatic ring, alicyclic, heterocyclic). Thus, I [P1-P4 = CH2:CHCO2, L1-L4 = (CH2)4, R1 = R2 = H, Z1 = Z2 = CO2, a = b = 0, A = (p-C6H4)2] was prepared and mixed with CH2:CHCO2(CH2)4O-p-C6H4CO2-p-C6H4O2C-p-C6H4O(CH2)4O2CCH:CH2, Irgacure 907, and CHCl3 to give a liquid-crystalline composition, which was applied on a rubbed polyimide alignment film and UV-cured to give an optically anisotropic film showing retardation at wavelength 550 nm 220 nm.

IT 500307-43-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (film; photopolymerizable compds. and their liquid-crystalline compns. for crosslinked polymer hard films with optical anisotropy)

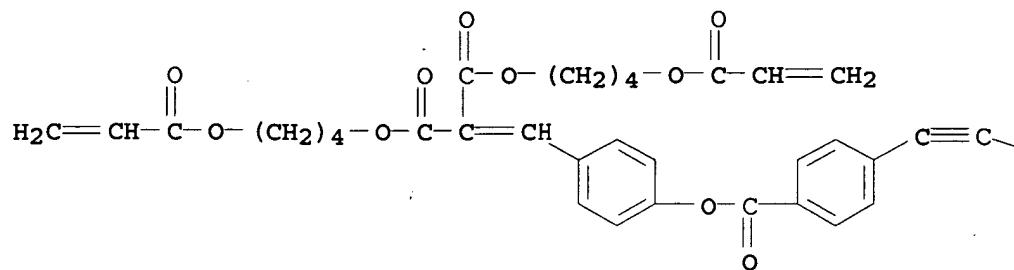
RN 500307-43-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and tetrakis[4-[(1-oxo-2-propenyl)oxy]butyl] 2,2'-[1,2-ethynediylbis(4,1-phenylenecarbonyloxy-4,1-phenylenemethylidyne)]bis[propanedioate] (9CI) (CA INDEX NAME)

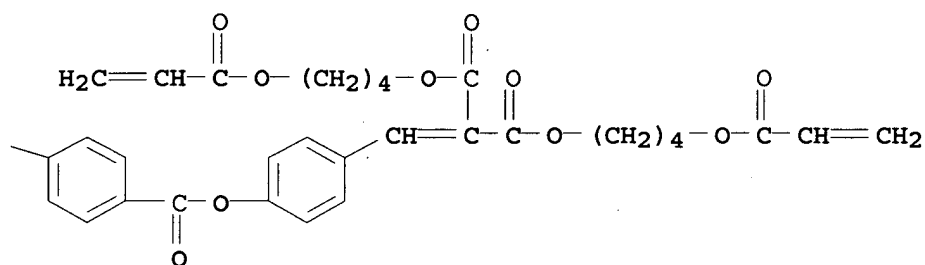
CM 1

CRN 500307-42-6  
 CMF C64 H62 O20

PAGE 1-A



PAGE 1-B



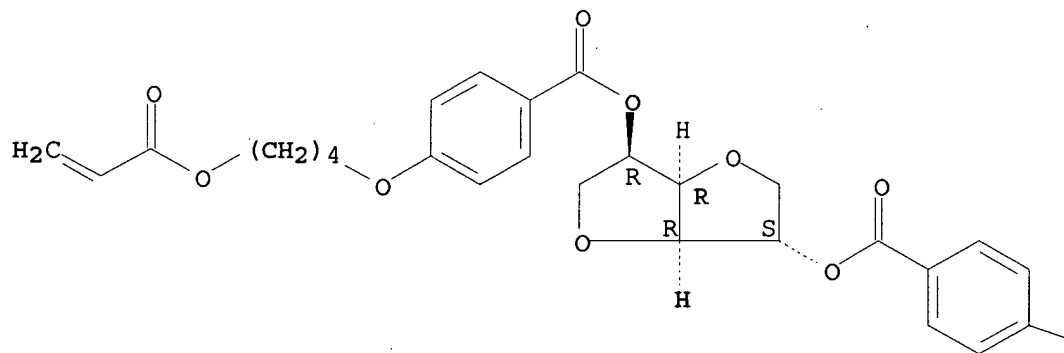
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CRN 250230-59-2

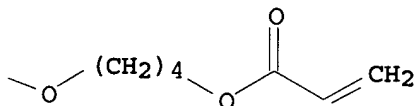
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

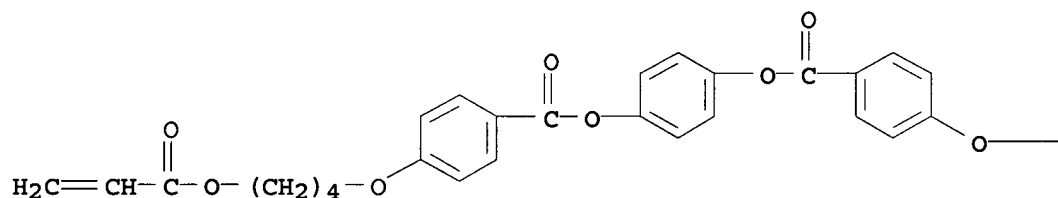


CM 3

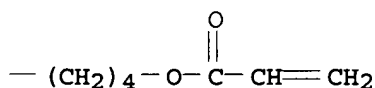
CRN 132694-65-6

CMF C34 H34 O10

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PAGE 1-B



IT 500324-41-4

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(liquid-crystalline; photopolymerizable compds. and their liquid-crystalline compns. for crosslinked polymer hard films with optical anisotropy)

RN 500324-41-4 HCAPLUS

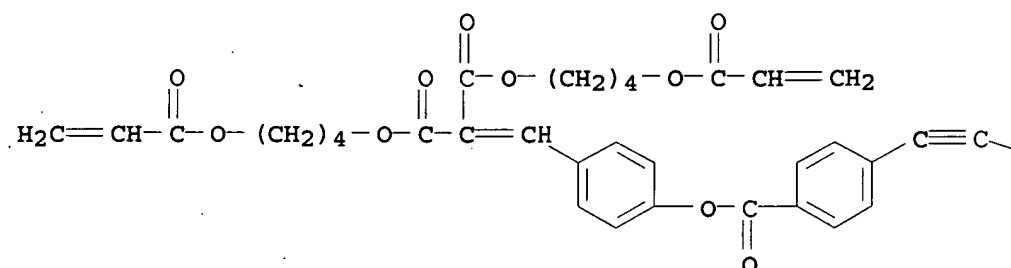
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], mixt. with 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and tetrakis[4-[(1-oxo-2-propenyl)oxy]butyl] 2,2'-[1,2-ethynediylbis(4,1-phenylenecarbonyloxy-4,1-phenylenemethylidyne)]bis[propanedioate] (9CI) (CA INDEX NAME)

CM 1

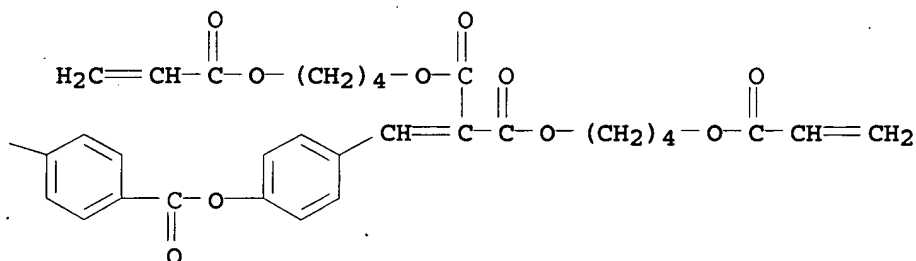
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CMF C64 H62 O20

PAGE 1-A



PAGE 1-B



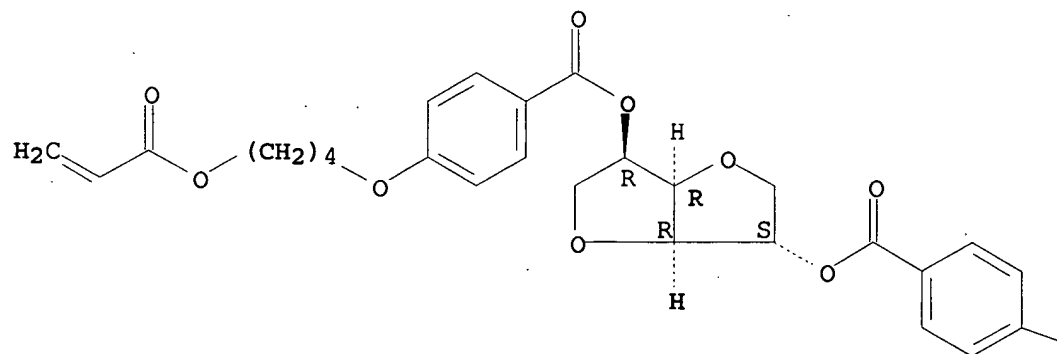
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CRN 250230-59-2

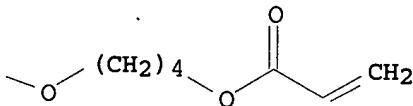
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

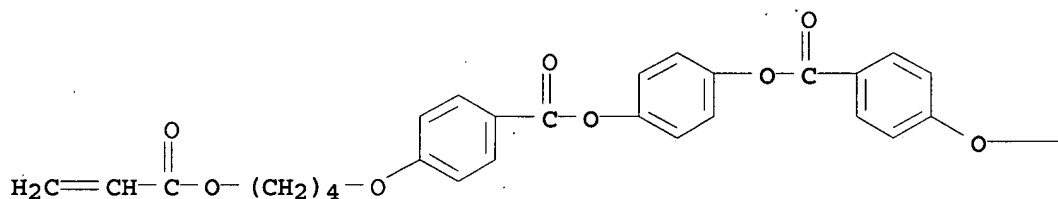


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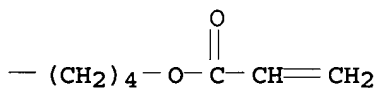
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IC ICM C07C069-773

ICS C07C233-75; C07C233-81; C08F022-10; C09K019-38; G02F001-13;  
G03F007-027CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 25, 38, 73, 75

IT 500307-43-7P 500307-44-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(film; photopolymerizable compds. and their liquid-crystalline compns.  
for crosslinked polymer hard films with optical anisotropy)

IT 500324-01-6 500324-41-4

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
(Reactant or reagent); USES (Uses)(liquid-crystalline; photopolymerizable compds. and their liquid-crystalline  
compns. for crosslinked polymer hard films with optical

anisotropy)

L14 ANSWER 22 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:792275 HCAPLUS

DOCUMENT NUMBER: 137:331152

TITLE: Photoreactive chiral agents, their liquid crystal compositions with good changeability of helical twisting structures, method for changing and fixing their structures, and their uses

INVENTOR(S): Yumoto, Masatoshi; Ichihashi, Mitsuyoshi; Hayashi, Keiichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

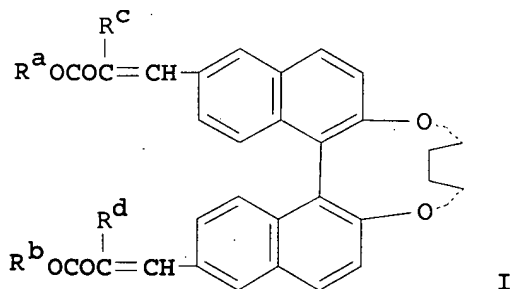
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ---	DATE -----	APPLICATION NO. -----	DATE
JP 2002302487	A	20021018	JP 2001-370106	200112 04
US 2003006398	A1	20030109	US 2001-13463	200112 13
US 6610216	B2	20030826		
PRIORITY APPLN. INFO.:			JP 2000-381003	A 200012 14
			JP 2001-370106	A 200112 04

OTHER SOURCE(S): MARPAT 137:331152  
GI

AB The invention relates to chiral agents I ( $R_a$ ,  $R_b$  = H, alkyl, aryl, hetero-ring, alkenyl, alkynyl;  $R_c$ ,  $R_d$  = H, alkyl, alkoxycarbonyl; L = bivalent group; binaphthyl part showing R or S axial chirality). The liquid crystal comps. are useful for color filters (liquid crystal displays), optical films, and recording media.

IT 473442-55-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(m pphotoreactive chiral agents with good changeability of helical twisting structures of liquid crystals)

RN 473442-55-6 HCAPLUS

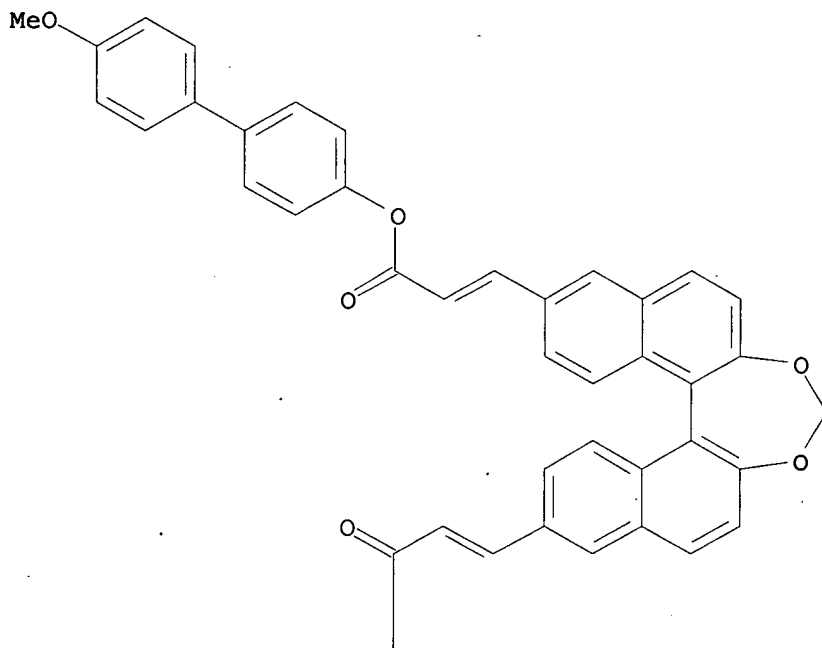
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis(4'-methoxy[1,1'-biphenyl]-4-yl) 3,3'-(11bR)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

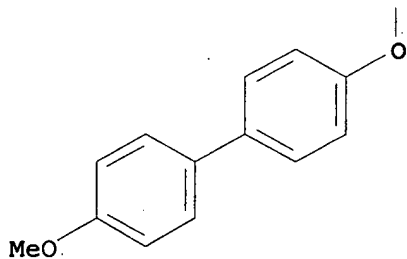
CRN 473442-54-5

CMF C53 H38 O8

PAGE 1-A



PAGE 2-A



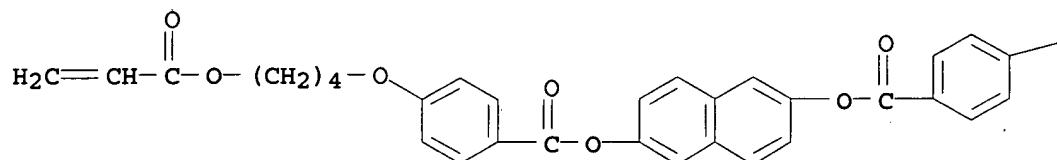


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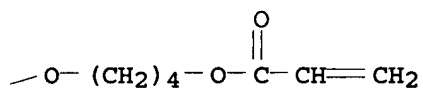
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



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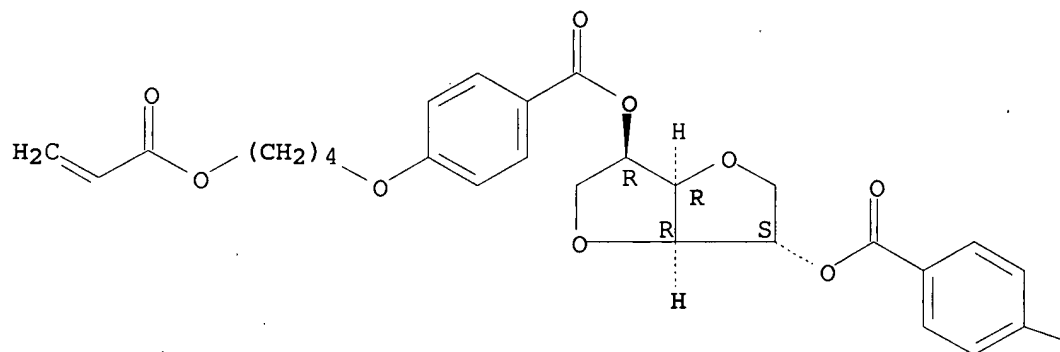
CM 3

CRN 250230-59-2

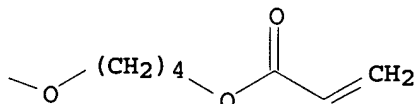
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

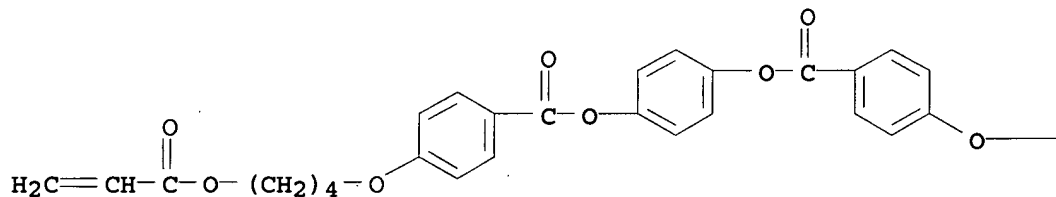


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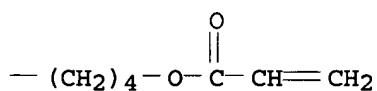
CRN 132694-65-6

CMF C34 H34 O10

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PAGE 1-B



IT 473441-71-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photoreactive chiral agents with good changeability of helical twisting structures of liquid crystals)

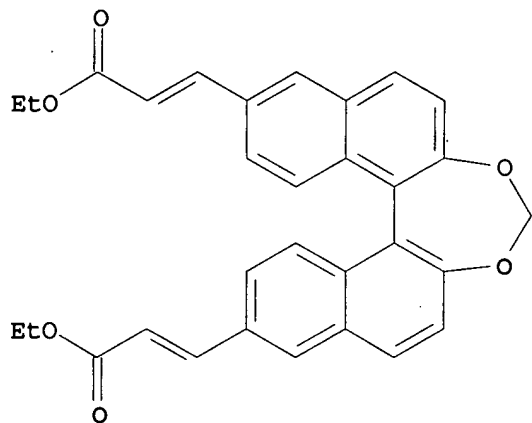
RN 473441-71-3 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with diethyl 3,3'-(11bS)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 473441-63-3

CMF C31 H26 O6

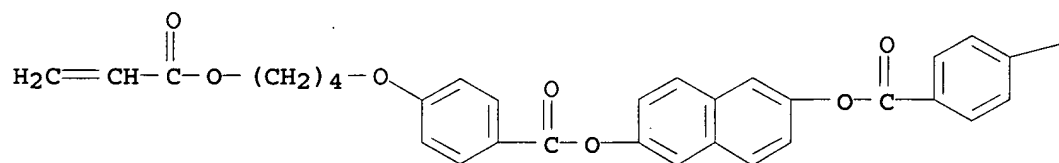


CM 2

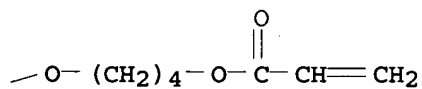
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CMF C38 H36 O10

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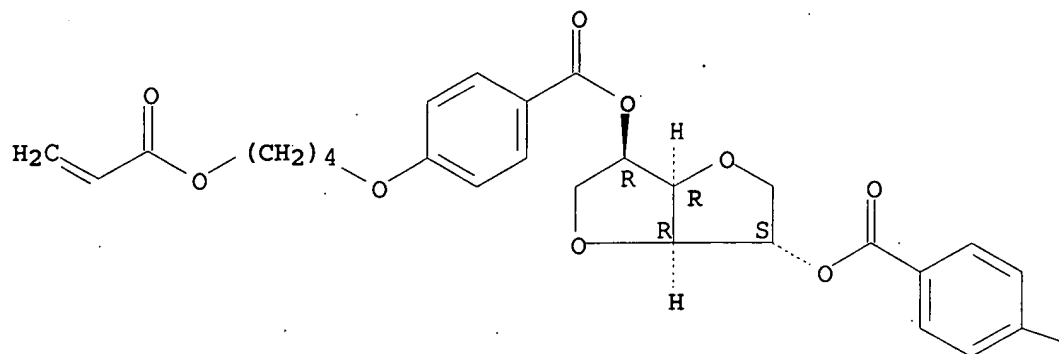
CM 3

CRN 250230-59-2

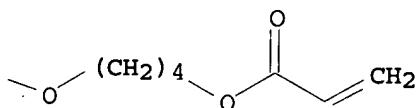
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

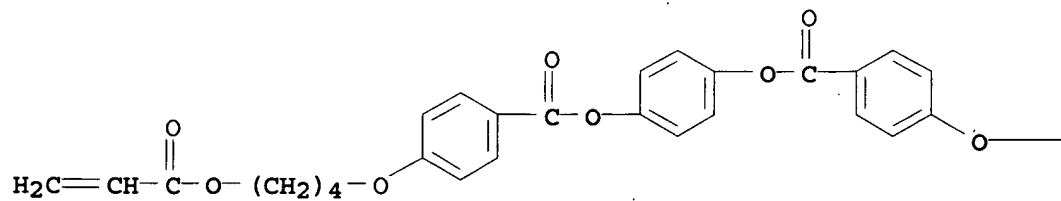


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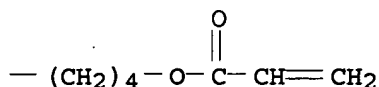
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IC ICM C07D321-00  
ICS C07D321-10; C07F009-6574; C09K019-38; C09K019-54; G02B001-04;  
G02B005-20; G02B005-30; C07M007-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 73

IT 473442-55-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(m pphotoreactive chiral agents with good changeability of  
helical twisting structures of liquid crystals)

IT 473441-70-2P 473441-71-3P 473441-72-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(photoreactive chiral agents with good changeability of helical  
twisting structures of liquid crystals)

L14 ANSWER 23 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:792143 HCAPLUS

DOCUMENT NUMBER: 137:302363

TITLE: Liquid crystal composition, color filter and  
liquid crystal display device

INVENTOR(S): Kawabata, Kouya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 40 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1249483	A1	20021016	EP 2002-252562	200204 10
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002309103	A	20021023	JP 2001-115231	200104 13
JP 2002309256	A	20021023	JP 2001-115902	200104 13
TW 583299	B	20040411	TW 2002-91106858	200204 04
US 2002150698	A1	20021017	US 2002-119301	200204

US 6818261 B2 20041116 10  
PRIORITY APPLN. INFO.: JP 2001-115231 A 200104  
13  
JP 2001-115902 A 200104  
13

AB The present invention discloses a liquid crystal composition comprising at least a liquid crystal compound including at least one polymerizing group, a chiral agent and a polymerization initiator, and being filtered using a filter having a pore size of  $\leq 1$   $\mu$ m. The present invention discloses a liquid crystal composition comprising the components of the above described liquid crystal composition, an air-interface orientation agent and a solvent, and having a viscosity ranging from 1-100 cP; a color filter produced using one of these compns.; and a liquid crystal display device employing the color filter.

IT 461393-05-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(liquid crystal composition and color filter for liquid crystal display device containing)

RN 461393-05-5 HCAPLUS

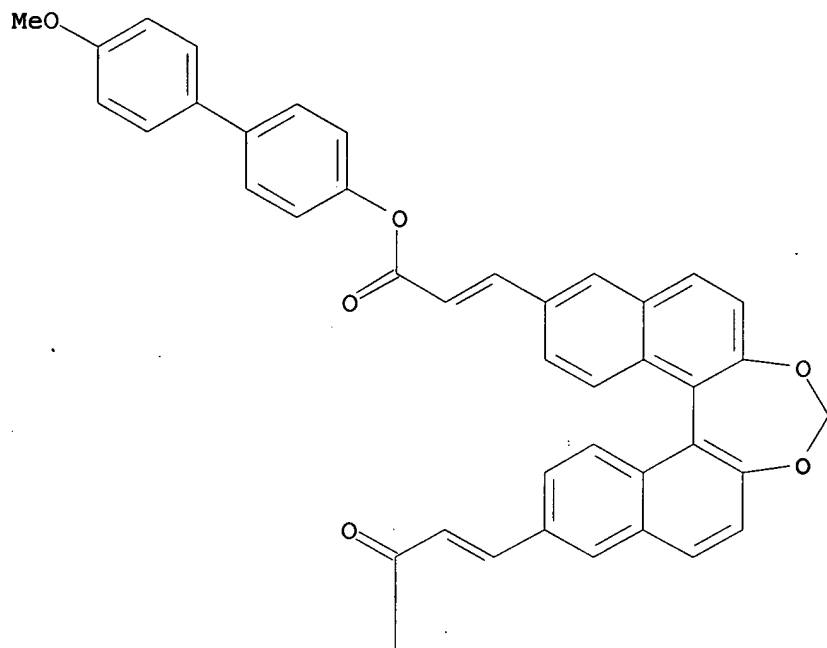
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis(4'-methoxy[1,1'-biphenyl]-4-yl) (2E,2'E)-3,3'-(11bR)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
(CA INDEX NAME)

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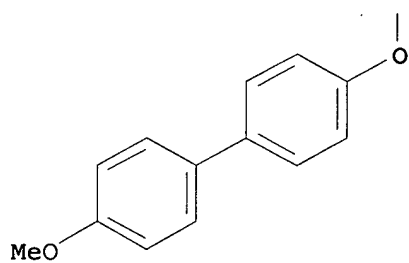
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CMF C53 H38 08

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PAGE 2-A

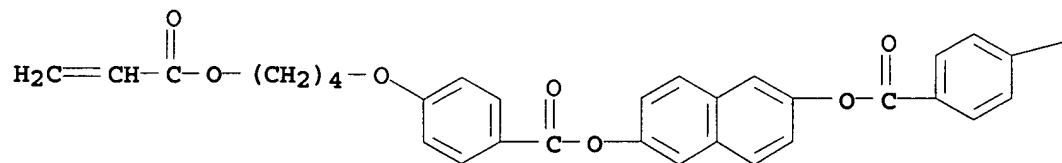


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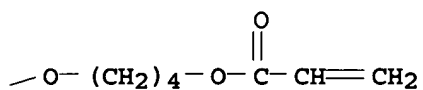
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CMF C38 H36 O10

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PAGE 1-B



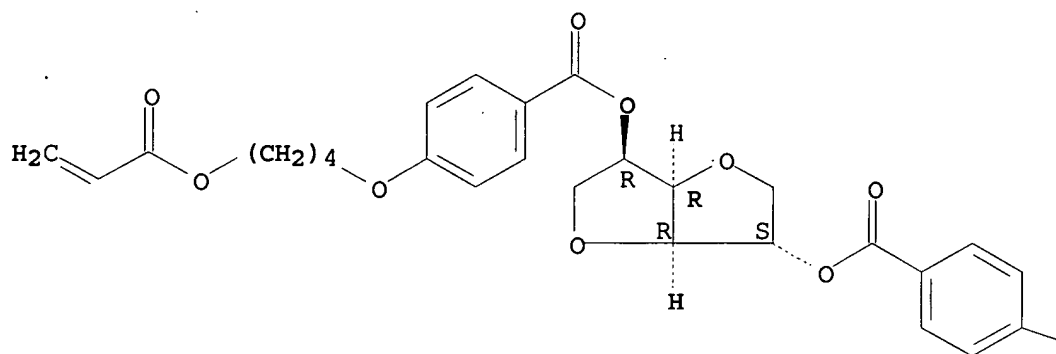
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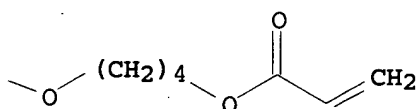
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



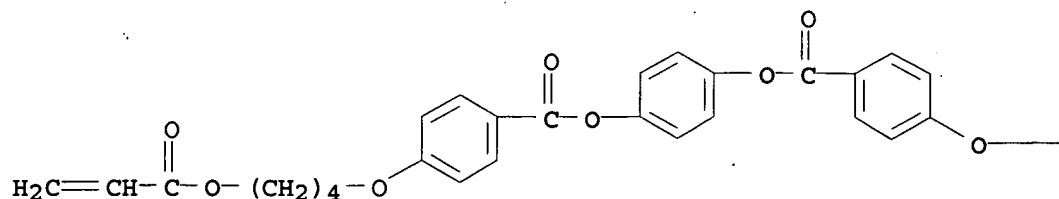
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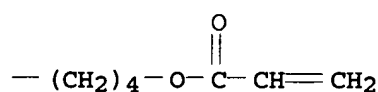
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PAGE 1-A



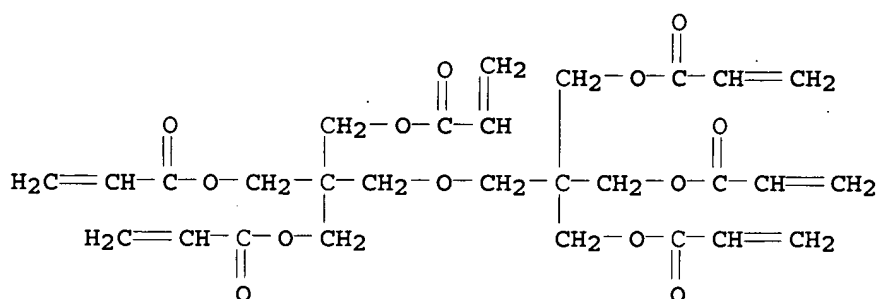
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC ICM C09K019-38

ICS C09K019-58; G02B005-20

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 360076-77-3P 461393-05-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(liquid crystal composition and color filter for liquid crystal display device containing)

REFERENCE COUNT: 13      THERE ARE 13 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L14 ANSWER 24 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:711176 HCAPLUS

DOCUMENT NUMBER: 137:255468

TITLE: Color filters having cholesteric liquid crystal optical polarizing layer for liquid crystal

INVENTOR(S): displays and method for manufacture thereof  
 Kawahata, Yasunari  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002267830	A	20020918	JP 2001-69419	20010312
PRIORITY APPLN. INFO.:			JP 2001-69419	20010312

AB The invention relates to color filters having a cholesteric liquid crystal optical polarizing layer having pixels for liquid crystal displays, wherein the openings, which does not contains the liquid crystal layer, are disposed among pixels. The color filter shows the high resolution and low production cost.

IT 461393-05-5

RL: DEV (Device component use); USES (Uses)  
 (cholesteric liquid crystal composition for color filters in liquid crystal displays; color filters having cholesteric liquid crystal optical polarizing layer for liquid crystal displays and method for manufacture thereof)

RN 461393-05-5 HCAPLUS

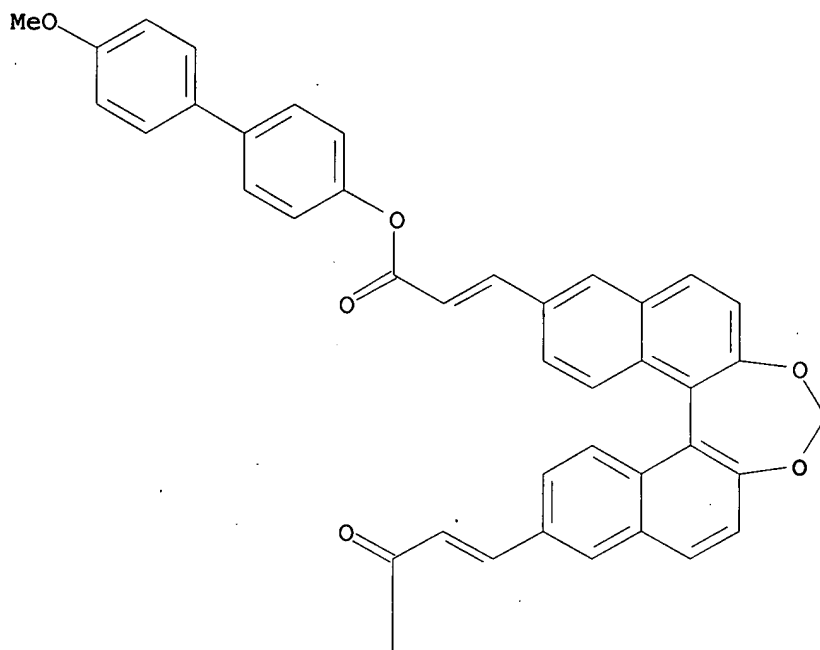
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis(4'-methoxy[1,1'-biphenyl]-4-yl) (2E,2'E)-3,3'-(11bR)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
 (CA INDEX NAME)

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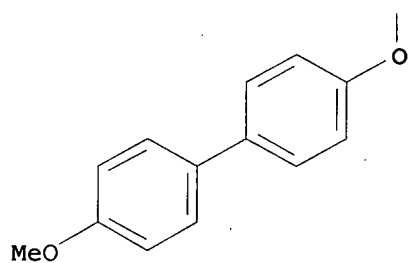
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CMF C53 H38 08

PAGE 1-A



PAGE 2-A

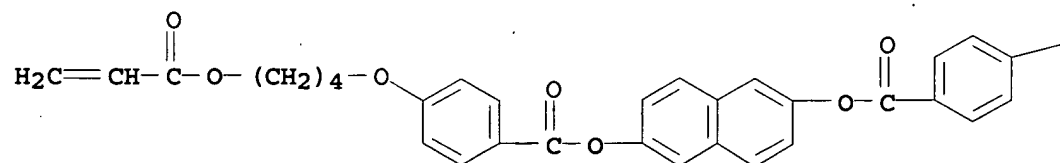


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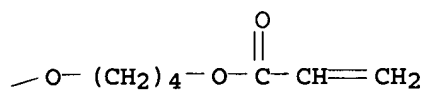
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CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



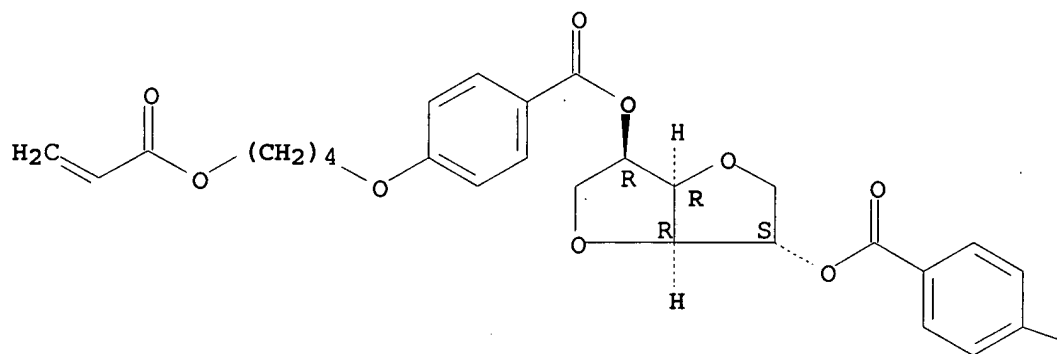
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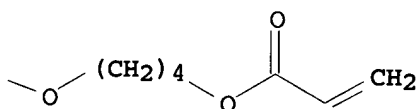
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

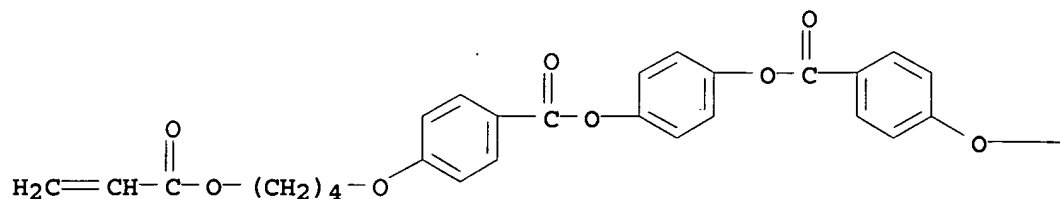


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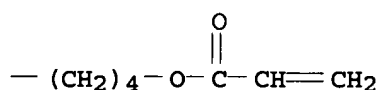
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CMF C34 H34 O10

PAGE 1-A



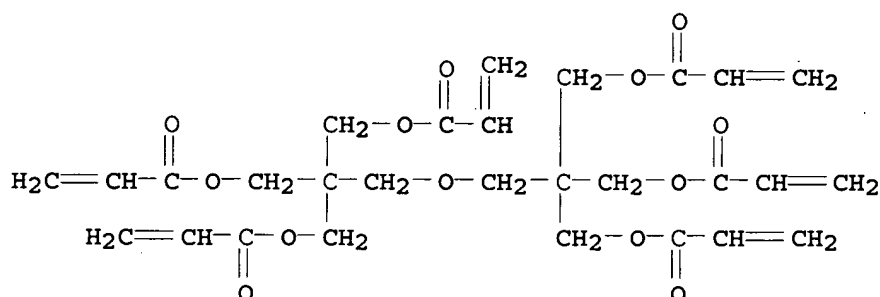
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B005-20

ICS G02B005-30; G02F001-1335

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 461393-05-5

RL: DEV (Device component use); USES (Uses)

(cholesteric liquid crystal composition for color filters in liquid crystal displays; color filters having cholesteric liquid crystal optical polarizing layer for liquid crystal displays and method for manufacture thereof)

L14 ANSWER 25 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:711175 HCAPLUS

DOCUMENT NUMBER: 137:255467

TITLE: Method for manufacturing color filters having  
cholesteric liquid crystal optical polarizing  
layer for liquid crystal displays

INVENTOR(S) : Kawahata, Koya; Tatsuda, Sumitaka

PATENT ASSIGNEE(S) : Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002267829	A	20020918	JP 2001-69418	200103 12
				200103 12

PRIORITY APPLN. INFO.: JP 2001-69418

AB The title method includes the steps of: forming liquid crystal layers containing liquid crystal having a polymerizable group and a photoreactive chiral agent; imagewise irradiating the liquid crystal layer with light active towards the chiral agent; photopolymerizing the liquid crystals, wherein a clarifying step by heating/rapidly cooling of the liquid crystal layer is taken place before the irradiation step. The color filter shows the high resolution and low production cost.

IT 461393-05-5

RL: DEV (Device component use); USES (Uses)  
 (light-sensitive liquid crystal for liquid crystal layer; color filters having cholesteric liquid crystal optical polarizing layer for liquid crystal displays)

RN 461393-05-5 HCAPLUS

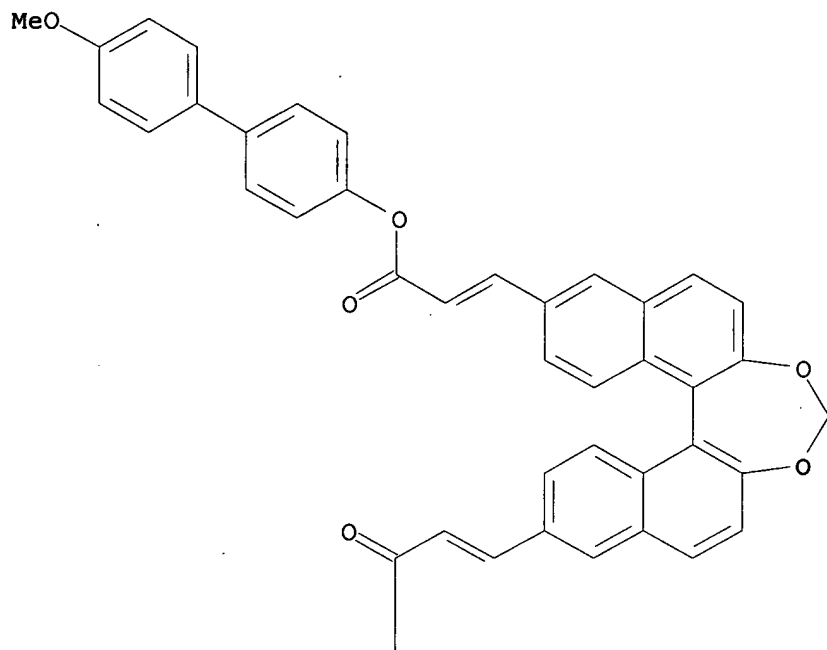
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis(4'-methoxy[1,1'-biphenyl]-4-yl) (2E,2'E)-3,3'-(11bR)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
 (CA INDEX NAME)

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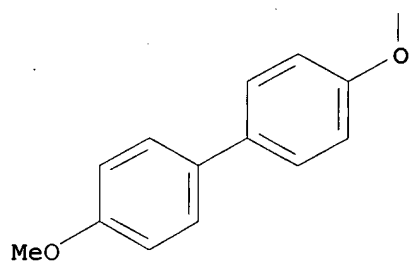
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CMF C53 H38 O8

PAGE 1-A



PAGE 2-A

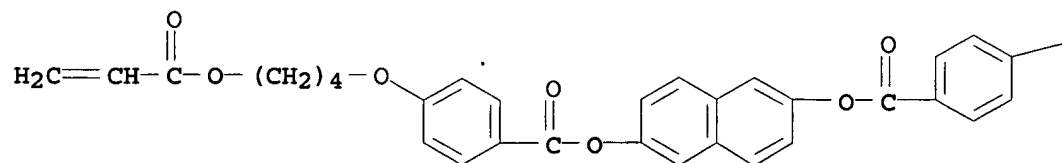


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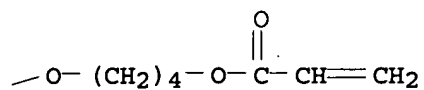
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CMF C38 H36 O10

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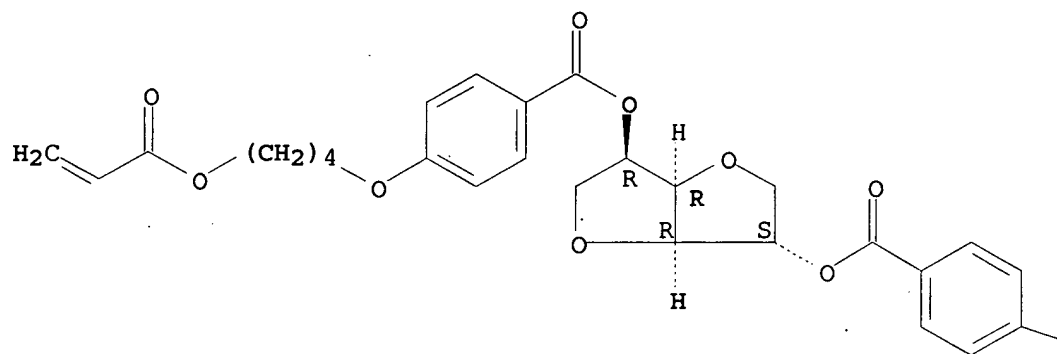
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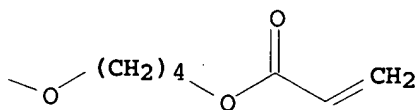
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



CM 4

CRN 132694-65-6

CMF C34 H34 O10





DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002241756	A	20020828	JP 2001-40772	20010216
PRIORITY APPLN. INFO.:				20010216
				20010216

AB The liquid crystal compns. contain liquid crystal compds. having  $\geq 1$  polymerizable group(s), a photoreactive chiral agent, a gelling agent, and a solvent. Color filters are manufactured by application of the compns. on a substrate followed by imagewise irradiation of the layer with light, to which the chiral agent is sensitive, for photopolymerization of the liquid crystal compds. The color filters and liquid crystal displays equipped with such color filters are also claimed. The compns. have excellent coatability and thick layers with high uniformity can be formed.

IT 461393-05-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymerizable liquid crystal compns. containing photoreactive chiral agent and gelling agents for preparation of color filters for liquid crystal displays)

RN 461393-05-5 HCAPLUS

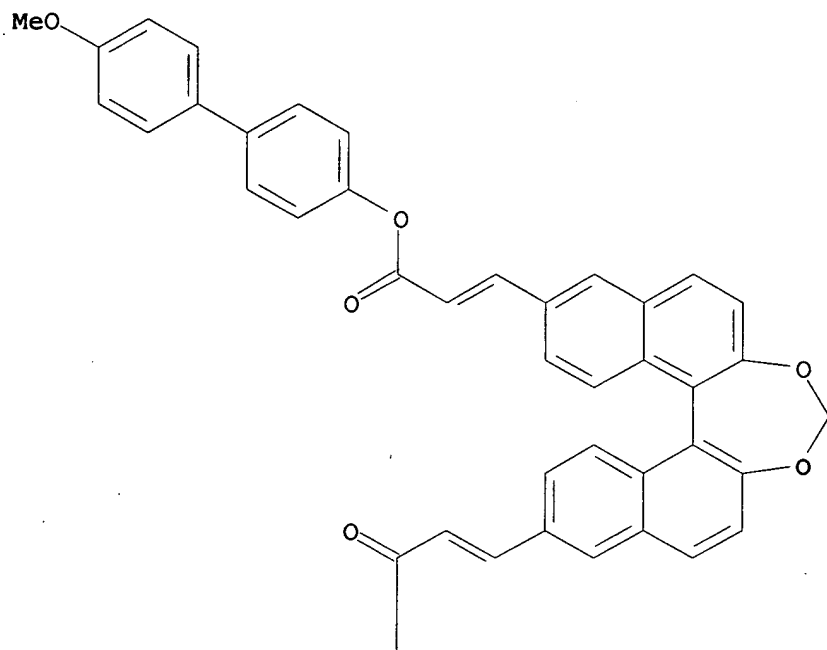
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis(4'-methoxy[1,1'-biphenyl]-4-yl) (2E,2'E)-3,3'-(11bR)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
 (CA INDEX NAME)

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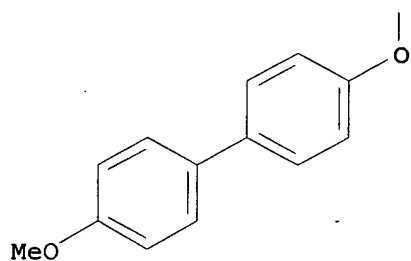
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CMF C53 H38 O8

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PAGE 2-A

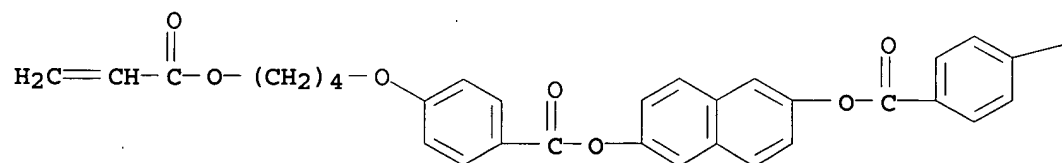


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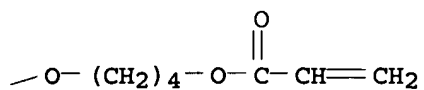
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CMF C38 H36 O10

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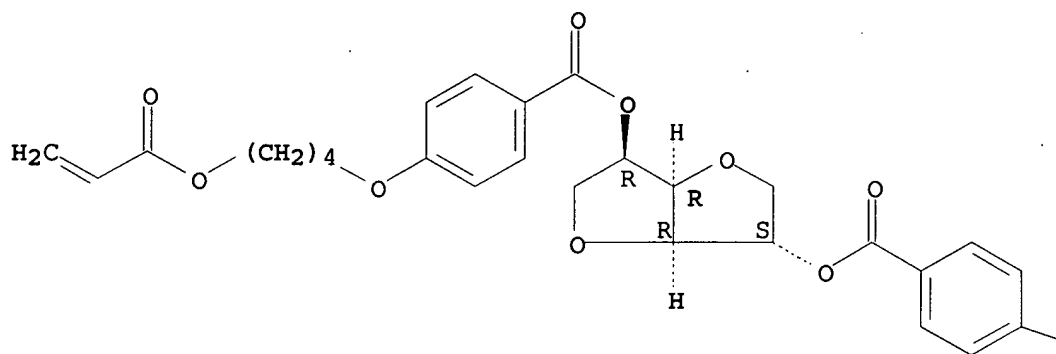
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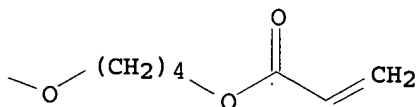
CMF C34 H38 O12

Absolute stereochemistry.

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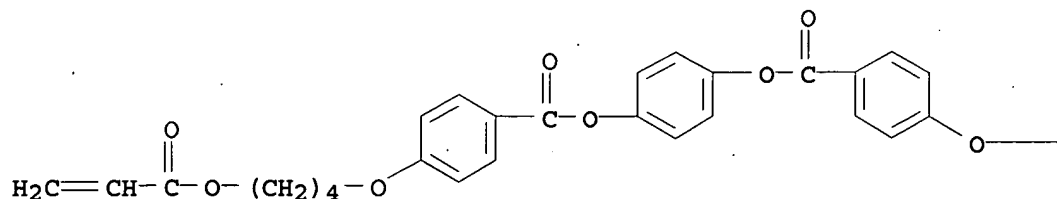


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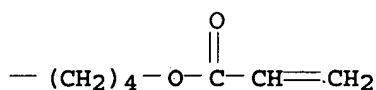
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CMF C34 H34 O10

PAGE 1-A



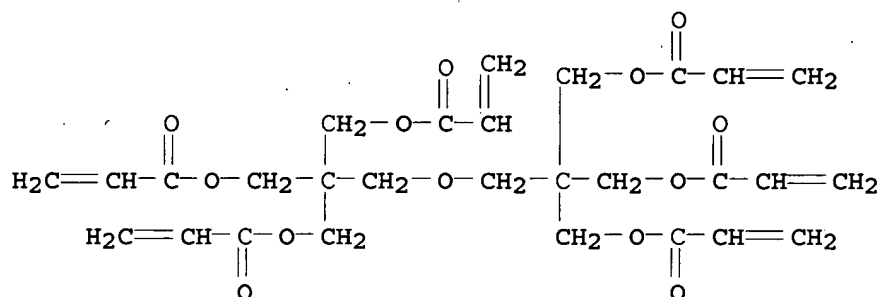
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC ICM C09K019-38

ICS G02B005-20; G02F001-1335

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 75

IT 461393-05-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymerizable liquid crystal compns. containing photoreactive chiral agent and gelling agents for preparation of color filters for liquid crystal displays)

L14 ANSWER 27 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:566541 HCAPLUS

DOCUMENT NUMBER: 137:117040

TITLE: Manufacture of cholesteric liquid crystal color filter for display devices

INVENTOR(S): Ichihashi, Mitsuyoshi; Iwakura, Ken

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002214424	A	20020731	JP 2001-10752	20010118
PRIORITY APPLN. INFO.:				20010118

AB The invention relates to a manufacture of a cholesteric liquid crystal color filter made up of a nematic liquid crystal compound and a photoreactive chiral compound, wherein the process comprises the steps of (1) irradiating the cholesteric liquid crystal layer with light ( $\lambda_1$ ) in the presence of O<sub>2</sub> to form a monochromatic selective light reflection state, and (2) irradiating with light ( $\lambda_2$ ) for imagewise polymerization to form a monochromatic pattern. The step (1) is repeated to form a multicolor pattern.

IT 370088-08-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photopolymn. in manufacture of cholesteric liquid crystal color filter used for display devices)

RN 370088-08-7 HCAPLUS

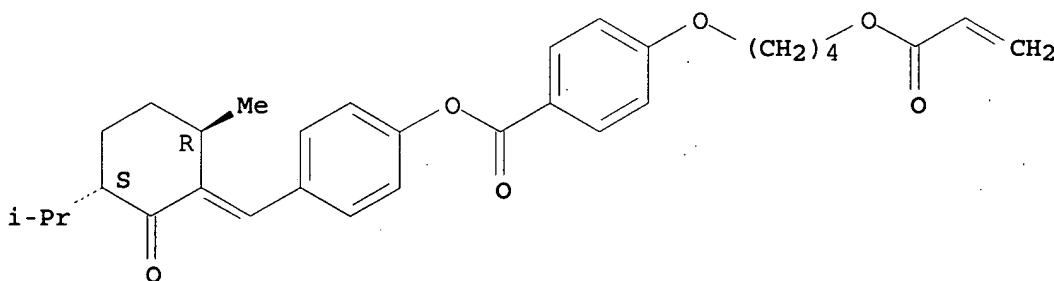
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 4-[[[(3R,6R)-6-methyl-3-(1-methylethyl)-2-oxocyclohexylidene]methyl]phenyl 4-[4-(1-oxo-2-propenyl)butoxy]benzoate, 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 370088-07-6

CMF C31 H36 O6

Absolute stereochemistry.  
 Double bond geometry unknown.

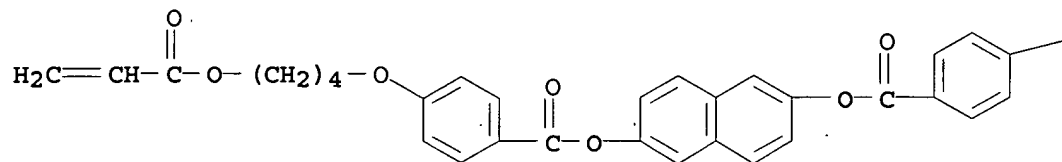


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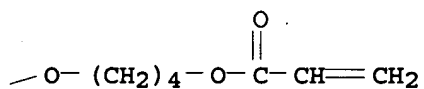
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CMF C38 H36 O10

PAGE 1-A



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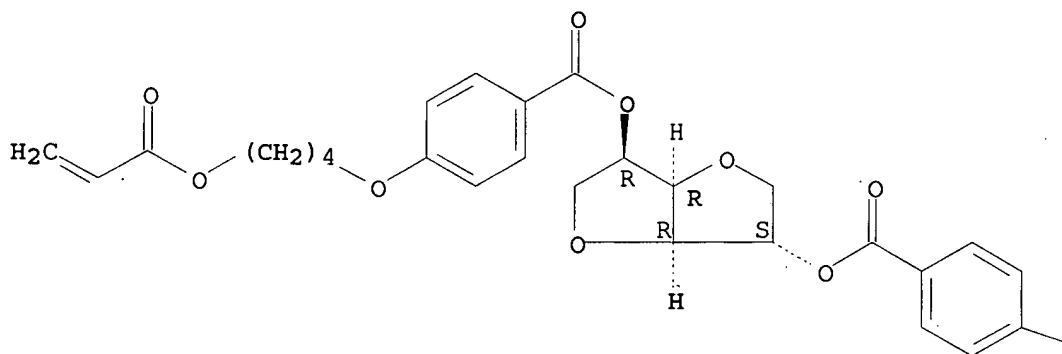
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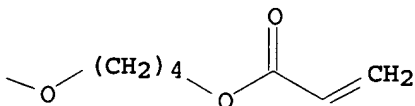
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Absolute stereochemistry.

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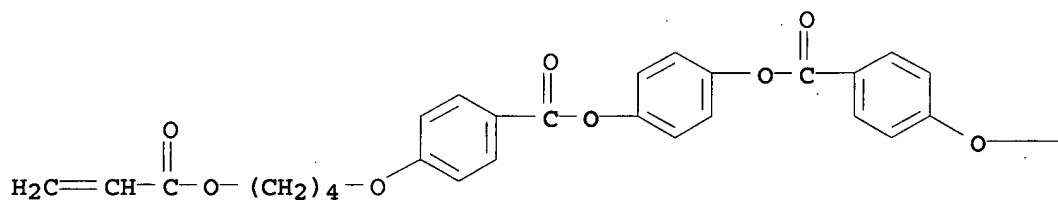


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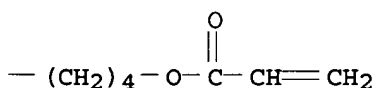
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CMF C34 H34 O10

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PAGE 1-B



IC ICM G02B005-20

ICS G02B005-20; G03F007-004; G03F007-027; G03F007-20; G02F001-1336

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 46, 73

IT 370088-08-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photopolymn. in manufacture of cholesteric liquid crystal color filter used for display devices)

L14 ANSWER 28 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:566540 HCAPLUS

DOCUMENT NUMBER: 137:131889

MEI HUANG EIC1700 REM4B28 571-272-3952

22/12/2006



TITLE: Manufacture of cholesteric liquid crystal color filter having improved color discrimination  
 INVENTOR(S): Ichihashi, Mitsuyoshi; Wakata, Yuichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002214423	A	20020731	JP 2001-10534	20010118
US 2002130993	A1	20020919	US 2002-46147	20020116
US 6909478	B2	20050621		
PRIORITY APPLN. INFO.:			JP 2001-10534	A 20010118

AB The process comprises forming a liquid crystal layer containing a liquid crystal compound, a photoactive chiral agent, and a polymerization initiator, and forming a partition wall around each pixel by irradiating with UV light through a mask before or after the formation of the pixel. A liquid crystal composition for forming the liquid crystal layer contains a surfactant. The irradiation of UV light polymerizes and fixes the outline of the pixel, thereby preventing diffusion of the chiral agent.

IT 370088-08-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photopolymn. in manufacture of cholesteric liquid crystal color filter having improved color discrimination)

RN 370088-08-7 HCAPLUS

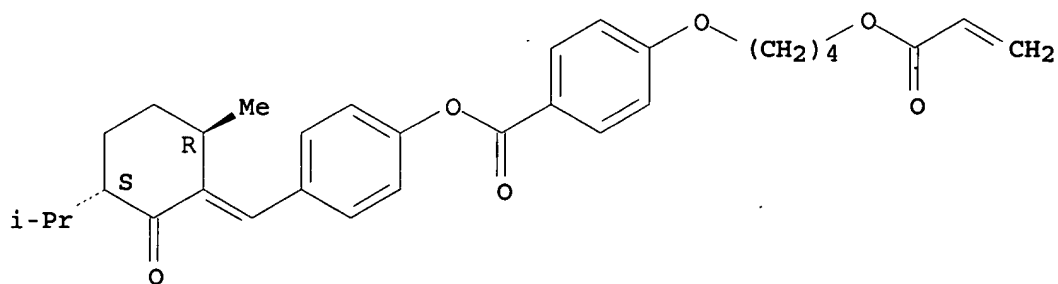
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 4-[[[(3R,6R)-6-methyl-3-(1-methylethyl)-2-oxocyclohexylidene]methyl]phenyl 4-[4-(1-oxo-2-propenyl)butoxy]benzoate, 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 370088-07-6

CMF C31 H36 O6

Absolute stereochemistry.  
 Double bond geometry unknown.

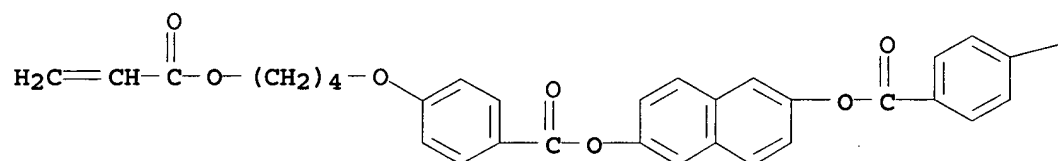


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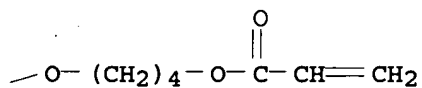
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



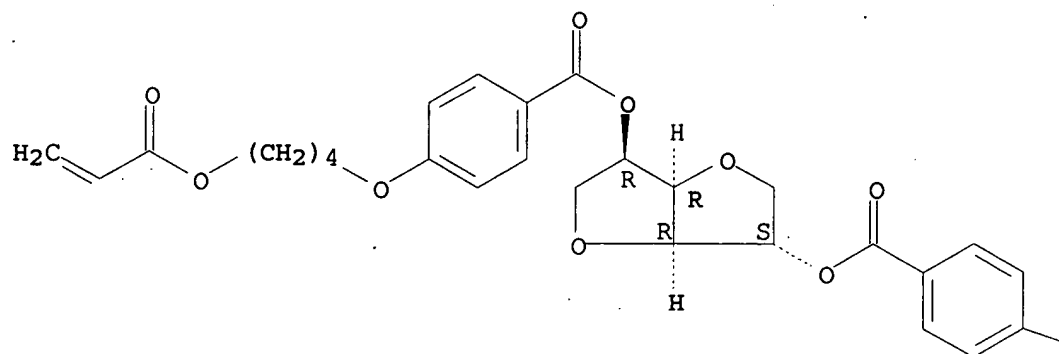
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CRN 250230-59-2

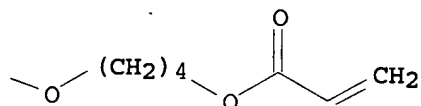
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

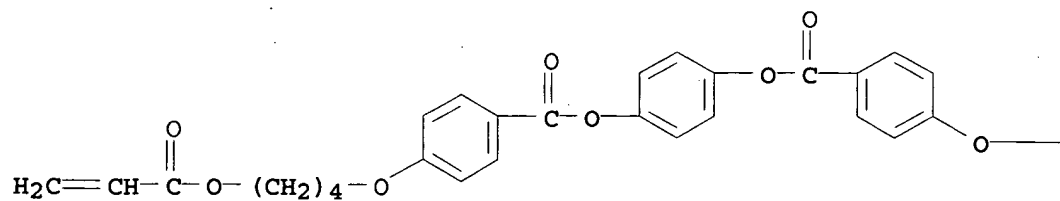


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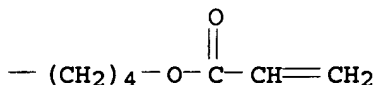
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



PAGE 1-B



IC ICM G02B005-20  
 ICS G02B005-20; G02F001-1335; G03F007-004; G03F007-027  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 35, 38, 46, 74, 75  
 IT 370088-08-7P  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photopolymn. in manufacture of cholesteric liquid crystal color filter having improved color discrimination)

L14 ANSWER 29 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:482652 HCAPLUS

DOCUMENT NUMBER: 137:70829

TITLE: Preparation of optically active binaphthol derivative as photoreactive chiral reagent and liquid crystal composition, method for alteration or fixation of liquid crystal spiral structure, liquid crystal color filter, optical film, and optical recording medium

INVENTOR(S): Yumoto, Masatoshi; Hayashi, Keiichiro; Ichihashi, Mitsuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

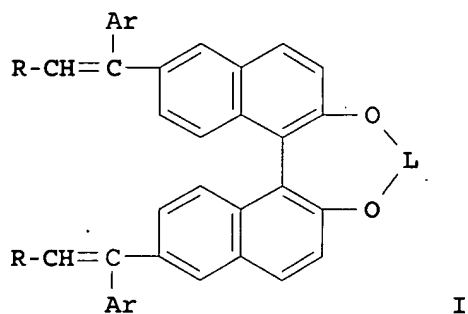
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002179670	A	20020626	JP 2000-381002	20001214
PRIORITY APPLN. INFO.:			JP 2000-381002	20001214

OTHER SOURCE(S): MARPAT 137:70829  
 GI



AB The title compound [(R)- or (S)-I; Ar = aryl, heterocyclyl; R = alkoxycarbonyl, aryloxy carbonyl, aryl, heterocyclyl, CONH<sub>2</sub>, cyano; L = a divalent group], which is photoisomerizable and can alter a spiral structure [twisting power or angle, in particular helical twisting power (HTP)] of liquid crystal upon light irradiation to provide a image display with high contrast and color purity, is prepared Also disclosed is a liquid crystal composition containing a liquid crystal compound containing at least one polymerizable group, a photopolymer. initiator, and the optically active compound I, in particular where the photopolymer. initiator and the optically active compound I have a different photosensitive wavelength region. The spiral structure of the liquid crystal composition is altered by changing the structure of the optically active compound I upon photoirradn. of the above liquid crystal composition A method for fixation of the spiral structure of the liquid crystal possesses a step comprising image-wise irradiation of the above liquid crystal composition with light at the photosensitive wavelength region of the optically active compound I and subsequent photopolymer. by irradiation with light at the photosensitive wavelength region of the photopolymer. initiator. A liquid crystal color filter, an optical film, and a recording medium containing at least one liquid crystal compound and the above optically active compound I are also disclosed. Thus, (S)-2,2'-methylenedioxy-6,6'-dibromo-1,1'-binaphthol 1.6, Me 4-methoxycinnamate 1.5, dichlorobis(triphenylphosphine)palladium(II) 0.12, Bu<sub>4</sub>NBr 2.6, K<sub>2</sub>CO<sub>3</sub> 1.0 g and 20 mL DMF were mixed and stirred at room temperature for 10 h to give 7.6% (S)-I (Ar = 4-methoxyphenyl, R = MeO<sub>2</sub>C) (II) in E/Z ratio of 19/1. When a nematic liquid crystal composition containing 0.5 part II and 99.5 part ZLI-1132 having a spiral pitch of 55.6 μm (HTP of 3.6 μm-1) was irradiated by a high-pressure mercury lamp (300 mW/cm<sup>2</sup>) for 3 min, a spiral pitch changed to 5.11 μm (HTP of 39 μm-1). A circular polarized light reflecting plate, a liquid crystal color filter, and a super-twisted-nematic liquid crystal display (STN) device optical compensation film with a polymer film containing II were also fabricated.

IT 439683-80-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(circular polarized light reflecting plate; preparation of optically active binaphthol derivative as photoisomerizable chiral reagent and liquid crystal color filter, optical film, and optical recording medium)

RN 439683-80-4 HCAPLUS

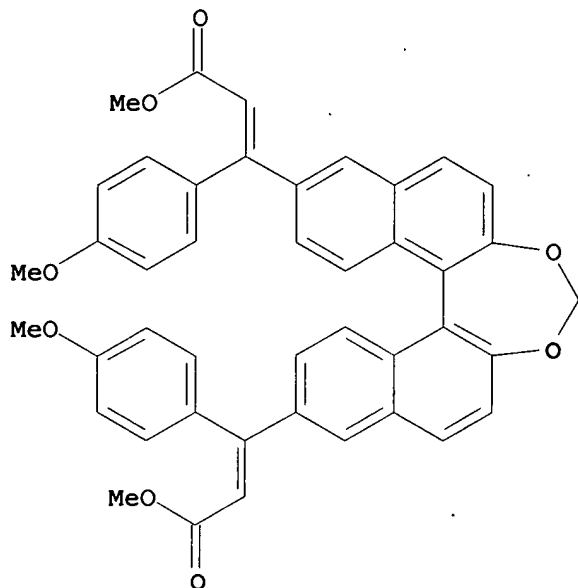
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene

bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], mixt. with  
 4-(2H-benzotriazol-2-yl)-1,3-benzenediol, 2-(4-chlorophenyl)-4,6-  
 bis(trichloromethyl)-1,3,5-triazine and dimethyl  
 3,3'-(11bS)-dinaphtho[2,1-d:1',2'-f][1,3]dioxepin-9,14-diylbis[(2E)-  
 3-(4-methoxyphenyl)-2-propenoate] (9CI) (CA INDEX NAME)

CM 1

CRN 439683-72-4

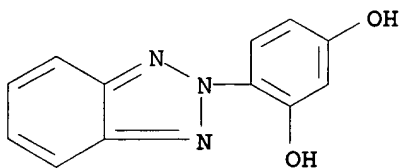
CMF C43 H34 O8



CM 2

CRN 22607-31-4

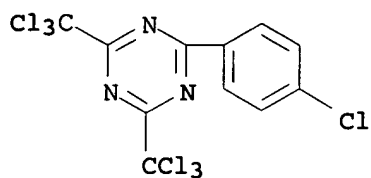
CMF C12 H9 N3 O2



CM 3

CRN 3712-60-5

CMF C11 H4 Cl7 N3



CM 4

CRN 387822-81-3

CMF (C38 H36 O10 . C34 H38 O12 . C34 H34 O10)x

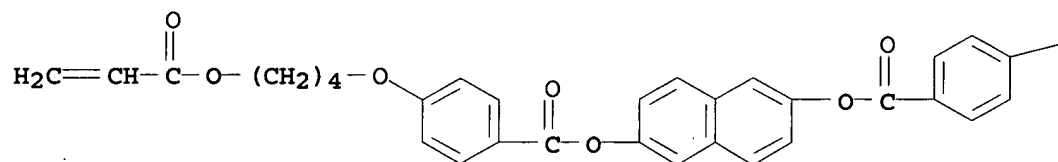
CCI PMS

CM 5

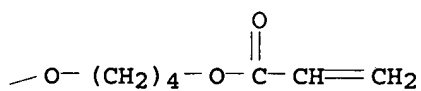
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



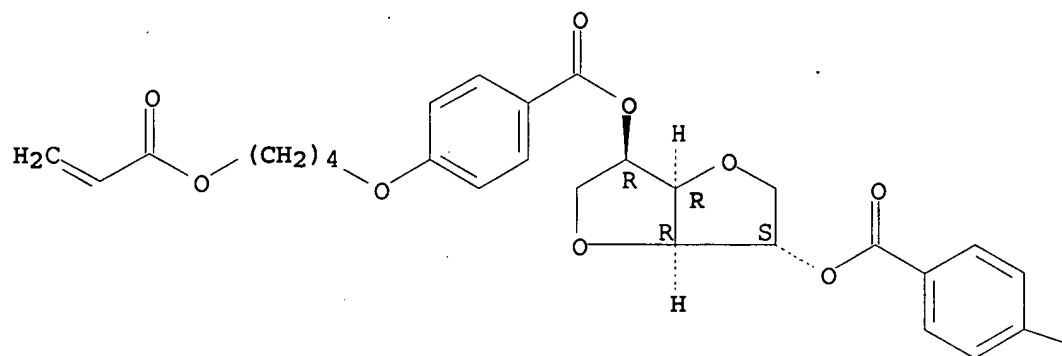
CM 6

CRN 250230-59-2

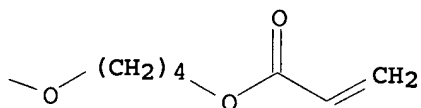
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

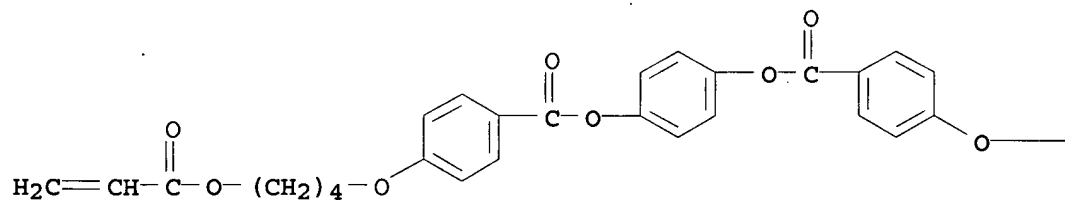


CM 7

CRN 132694-65-6

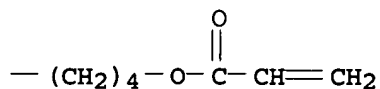
CMF C34 H34 O10

PAGE 1-A





PAGE 1-B



IT 439683-83-7P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (liquid crystal color filter; preparation of optically active binaphthol derivative as photoisomerizable chiral reagent and liquid crystal color filter, optical film, and optical recording medium)

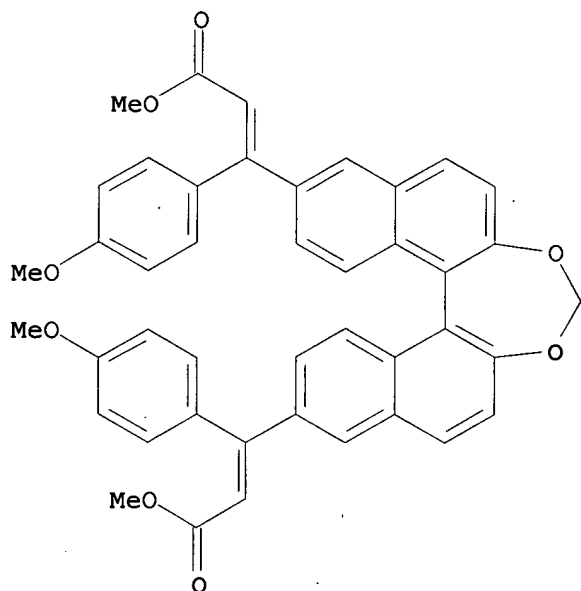
RN 439683-83-7 HCAPLUS

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 (CA INDEX NAME)

CM 1

CRN 439683-72-4

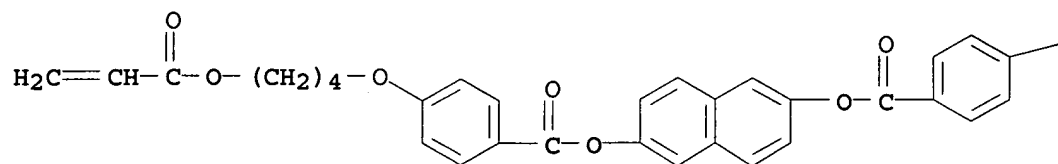
CMF C43 H34 O8



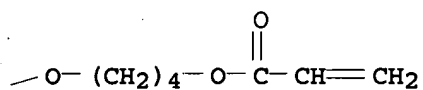
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CRN 339588-79-3  
CMF C38 H36 O10

PAGE 1-A



PAGE 1-B

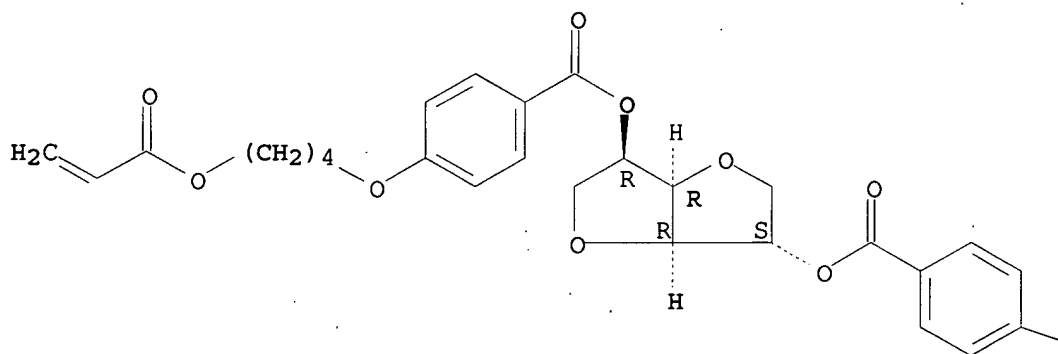


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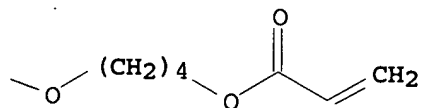
CRN 250230-59-2  
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

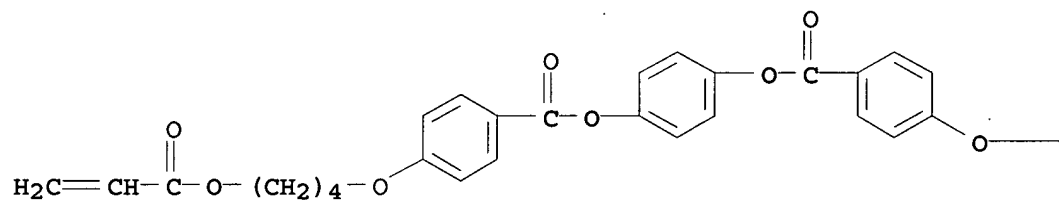


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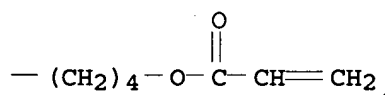
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CMF C34 H34 O10

PAGE 1-A



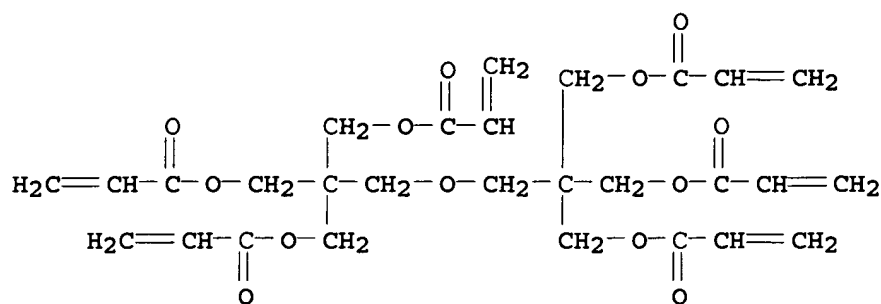
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC C07D321-10  
ICS C07D407-06; C07D493-04; C09K019-38; C09K019-54; G02B005-20;  
G02B005-30; G02F001-13; G02F001-1335; G03C001-73

CC 75-11 (Crystallography and Liquid Crystals)  
Section cross-reference(s): 74

IT 439683-80-4P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(circular polarized light reflecting plate; preparation of optically  
active binaphthol derivative as photoisomerizable chiral reagent and  
liquid crystal color filter, optical film, and optical recording  
medium)

IT 439683-83-7P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(liquid crystal color filter; preparation of optically active binaphthol  
derivative as photoisomerizable chiral reagent and liquid crystal color  
filter, optical film, and optical recording medium)

ACCESSION NUMBER: 2002:205085 HCAPLUS

DOCUMENT NUMBER: 136:254634

TITLE:           Optically reactive and optically active  
isomannide derivative, its use as optically  
reactive chiral agent, liquid crystal  
composition containing it, liquid crystal color  
filter, optical film, and optical recording  
medium containing the compound, and changing  
twisting of liquid crystal using the compound

INVENTOR(S) : Sugiyama, Takekatsu; Ichihashi, Mitsuyoshi;  
Hayashi, Keiichiro

PATENT ASSIGNEE(S) : Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002080478	A	20020319	JP 2001-5741	20010112
US 2002033479	A1	20020321	US 2001-887335	

US 6589445  
PRIORITY APPLN. INFO.:

B2 20030708

JP 2000-193143

A

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JP 2000-193142

A

200006  
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JP 2001-5740

A

200101  
12

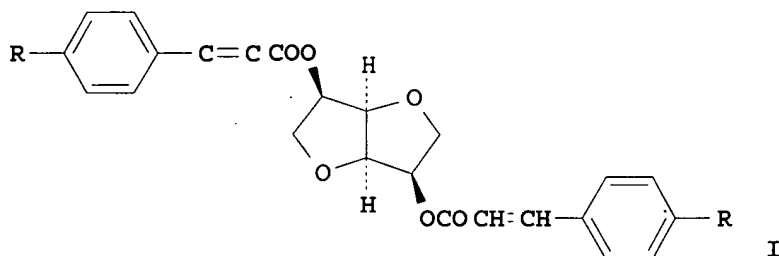
JP 2001-5741

A

200101  
12

OTHER SOURCE(S):  
GI

MARPAT 136:254634



AB The compound working as an optically reactive chiral agent comprises an isomannide derivative I (R = H, C1-15 alkoxy, C3-15 acryloyloxyalkyloxy, C4-15 methacryloyloxyalkyloxy), which changes twisting of liquid crystals by irradiation of light. The liquid crystal composition, liquid crystal color filter, optical film, and optical recording medium contain I. The orientation of liquid crystal composition is easily controlled with photosensitive compound by irradiation of light to give color filters with high color purity and wide color variation.

IT 404595-76-2P

RL: DEV (Device component use); PNU (Preparation, unclassified);

PREP (Preparation); USES (Uses)

(optically reactive isomannide derivative chiral agent for changing twisting of liquid crystals in color filters, optical films, and optical recording medium)

RN 404595-76-2 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 1,4:3,6-dianhydro-D-mannitol bis[(2E)-3-(4-methoxyphenyl)-2-propenoate], 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and

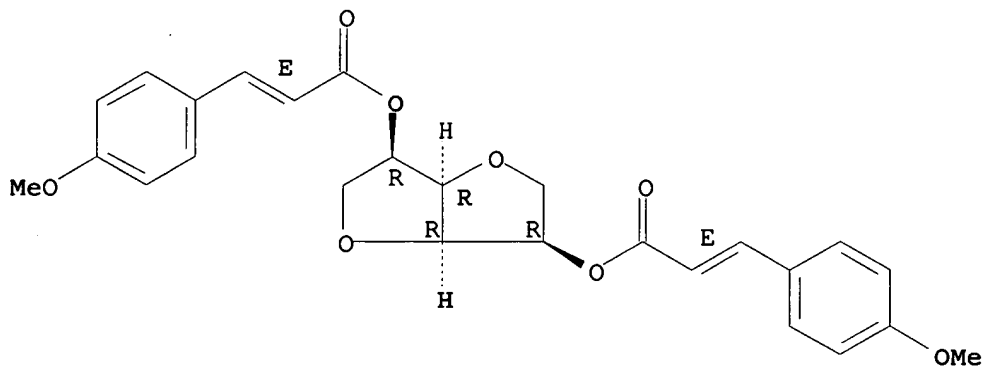
1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
(CA INDEX NAME)

CM 1

CRN 404929-56-2

CMF C26 H26 O8

Absolute stereochemistry.  
Double bond geometry as shown.

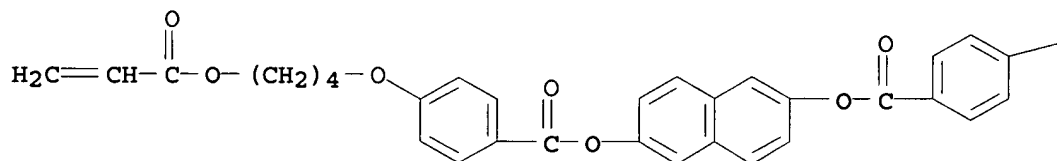


CM 2

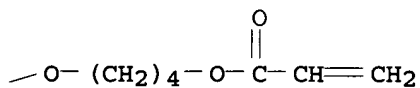
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



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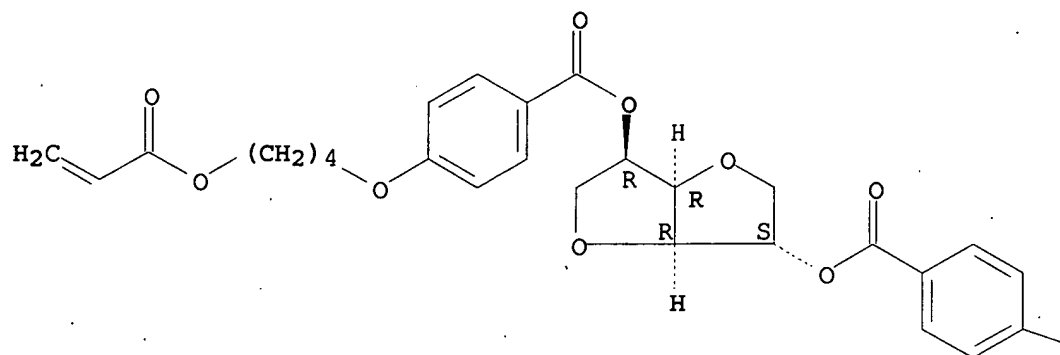
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CRN 250230-59-2

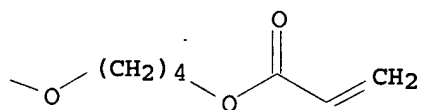
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

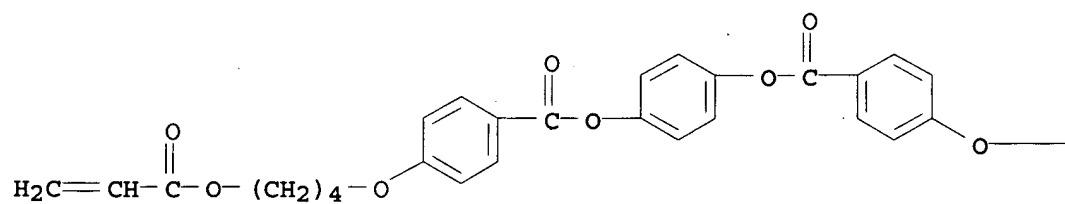


CM 4

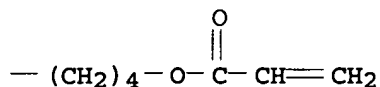
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



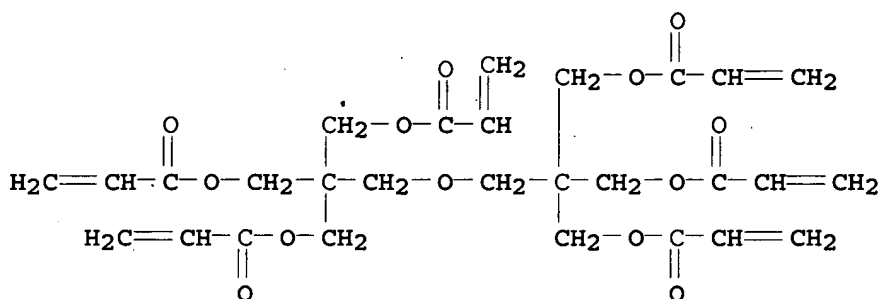
PAGE 1-B



CM 5

CRN 29570-58-9

CMF C28 H34 O13



IC ICM C07D493-04

ICS C09K019-34; C09K019-54; G02B005-20; G02B005-30; G02F001-13;  
G02F001-1335; G02F001-139; G03C001-73; C07M007-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 28, 73, 75

IT 404595-76-2P

RL: DEV (Device component use); PNU (Preparation, unclassified);

PREP (Preparation); USES (Uses)

(optically reactive isomannide derivative chiral agent for changing twisting of liquid crystals in color filters, optical films, and optical recording medium)

L14 ANSWER 31 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:31094 HCAPLUS

DOCUMENT NUMBER: 136:93582

TITLE: Liquid crystal composition comprising discotic liquid crystal molecules and alignment promoter

INVENTOR(S): Ichihashi, Mitsuyoshi; Kawata, Ken; Takeuchi, Hiroshi; Matsuoka, Koushin

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 115 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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MEI HUANG      EIC1700      REM4B28      571-272-3952

22/12/2006



EP 1170353	A2	20020109	EP 2001-115725	200107 06
EP 1170353	A3	20030122		
EP 1170353	B1	20051102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002020363	A	20020123	JP 2000-205710	200007 06
JP 2002038157	A	20020206	JP 2000-220963	200007 21
US 2002039627	A1	20020404	US 2001-899031	200107 06
US 6875483	B2	20050405		
JP 2002129162	A	20020509	JP 2001-206337	200107 06
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PRIORITY APPLN. INFO.:			JP 2000-205709	A 200007 06
			JP 2000-205710	A 200007 06
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## OTHER SOURCE(S): MARPAT 136:93582

AB A liquid crystal composition comprises liquid crystal mols. and an alignment promoter. The alignment promoter is represented by the general formula (Hb-L1Cyl-L2)nAr (Hb = C6-40-aliphatic, C1-40-aliphatic oligosiloxanoxy group; L1 = single bond, divalent linking group comprising alkylene, fluorine-substituted alkylene, -O-, -S-, -CO-, -NR-, -SO2-; L2 = single bond, divalent linking group comprising alkylene, alkenylene, alkynylene, -O-, -S-, -CO-, -NR-, -SO2-; R = H, C1-30-alkyl; Cyl = divalent aromatic or heterocyclic; n = 2 - 5; Ar = n-valent aromatic). The object of the present invention is to provide a liquid crystal composition in which liquid crystal mols. can easily be aligned uniformly. Another object of the invention is to provide an optically anisotropic element in which liquid crystal mols. are uniformly aligned near an interface having no orientation layer.

IT 387822-81-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(liquid crystal composition comprising discotic and rod-like liquid crystal mols. and alignment promoter)

RN 387822-81-3 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene

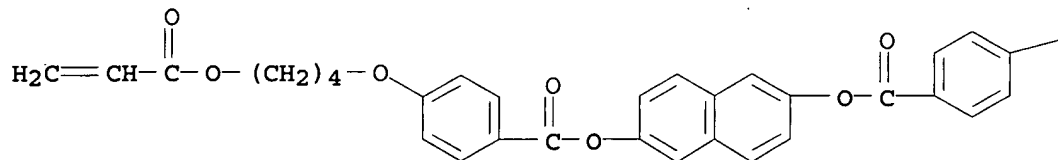
bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

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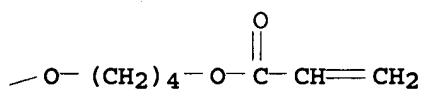
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



PAGE 1-B



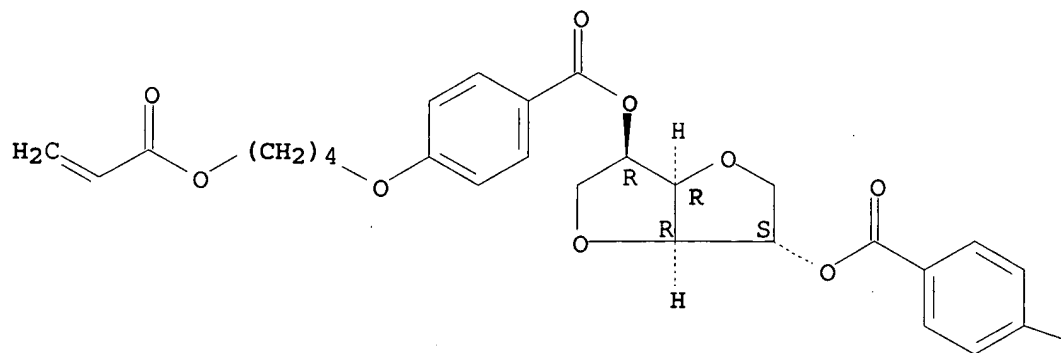
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CRN 250230-59-2

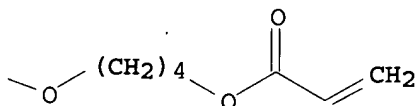
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

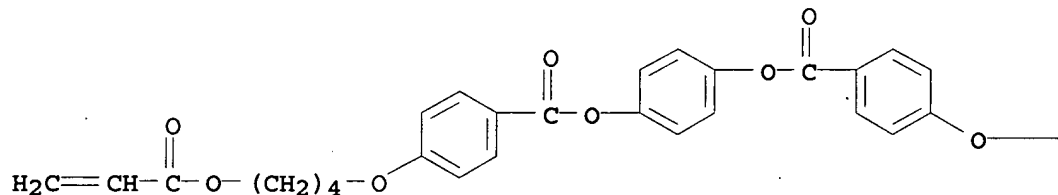


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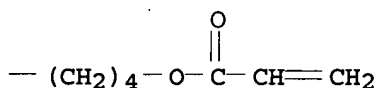
CRN 132694-65-6

CMF C34 H34 O10

PAGE 1-A



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IC ICM C09K019-56

ICS G02F001-1337

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 75

IT 387822-81-3

RL: PEP (Physical, engineering or chemical process); PRP

(Properties); TEM (Technical or engineered material use); PROC

(Process); USES (Uses)

(liquid crystal composition comprising discotic and rod-like liquid crystal mols. and alignment promoter)

L14 ANSWER 32 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:793630 HCAPLUS

MEI HUANG EIC1700 REM4B28 571-272-3952

22/12/2006

DOCUMENT NUMBER: 135:350653  
 TITLE: Cholesteric liquid crystal composition for color filter of optical imaging device such as liquid crystal display  
 INVENTOR(S): Ichihashi, Mitsuyoshi; Sugiyama, Takekatsu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001303057	A	20011031	JP 2000-119117	200004 20
PRIORITY APPLN. INFO.: JP 2000-119117				200004 20

AB The title composition contains a liquid crystal polymerizable monomer, a light-sensitive chiral compound, a polymerization initiator, and a dye, wherein the dye has a light absorption peak between light absorption peaks of the polymerization initiator and the light-sensitive chiral compound. The composition, which contains the aforementioned combination of the polymerization initiator, the chiral compound, and the dye, provides the color filter of little color mismatch, certain selective reflection colors, high sharpness, and good heat-resistance.

IT 370088-08-7

RL: MOA (Modifier or additive use); USES (Uses)  
 (cholesteric liquid crystal composition for color filter of liquid crystal displays)

RN 370088-08-7 HCAPLUS

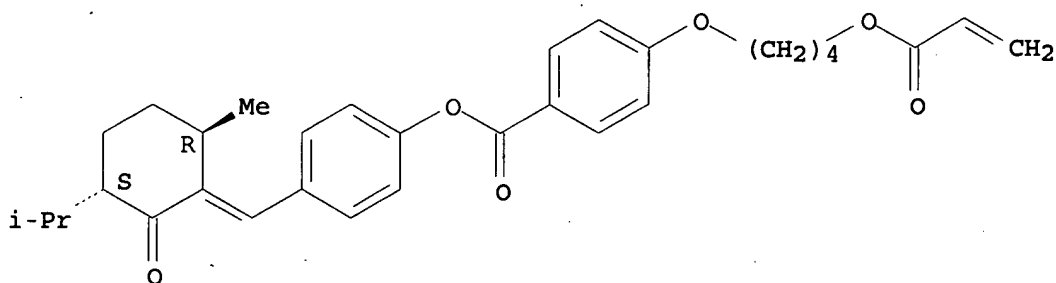
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 4-[[[(3R,6R)-6-methyl-3-(1-methylethyl)-2-oxocyclohexylidene]methyl]phenyl 4-[4-(1-oxo-2-propenyl)butoxy]benzoate, 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME).

CM 1

CRN 370088-07-6

CMF C31 H36 O6

Absolute stereochemistry.  
 Double bond geometry unknown.

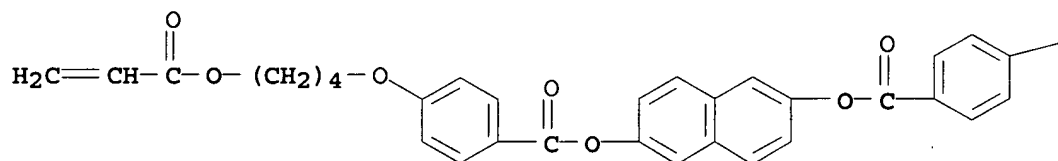


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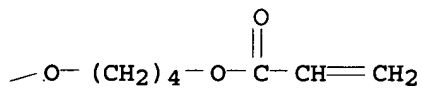
CRN 339588-79-3

CMF C38 H36 O10

PAGE 1-A



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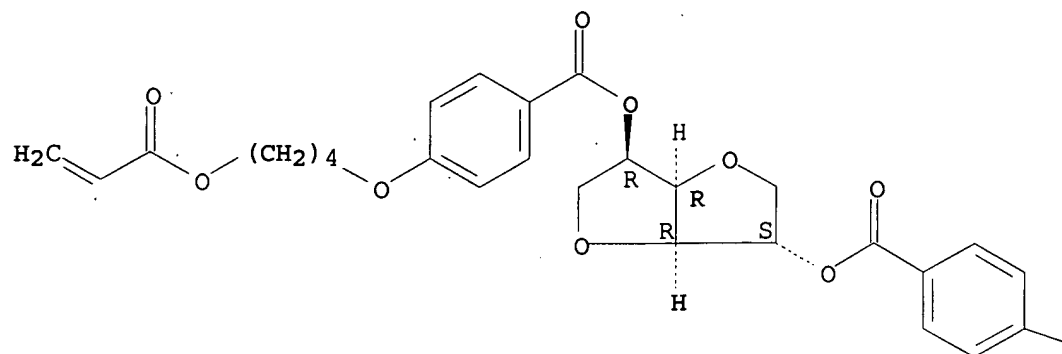
CM 3

CRN 250230-59-2

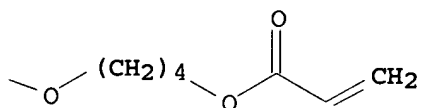
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

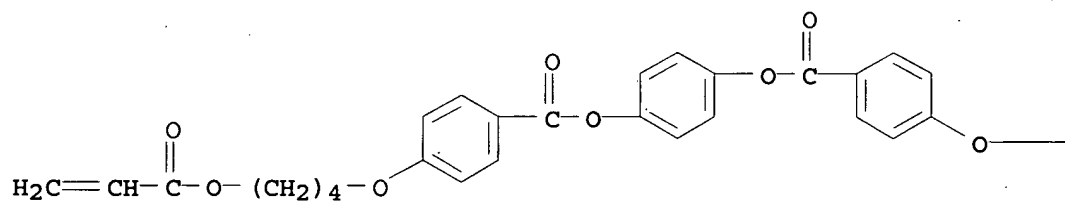


CM 4

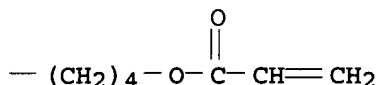
CRN 132694-65-6

CMF C34 H34 O10

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PAGE 1-B



IC ICM C09K019-02  
 ICS C09K019-38; C09K019-60; G02B005-20; G02F001-13; G02F001-1335  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 3712-60-5 13927-77-0D, Nickel dibutyldithiocarbamate, coordination compound with nickel **370088-08-7**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (cholesteric liquid crystal composition for color filter of liquid crystal displays)

L14 ANSWER 33 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:792143 HCAPLUS

DOCUMENT NUMBER: 135:337036

TITLE: Manufacture of cholesteric liquid crystal color filters with accurate color using photosensitive chiral compounds by controlled irradiation

INVENTOR(S): Ichihashi, Mitsuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001305329	A	20011031	JP 2000-119116	20000420
PRIORITY APPLN. INFO.: JP 2000-119116				20000420

AB The manufacturing method, useful even in the presence of O, contains (1) exposing compns., which comprise liquid crystalline polymerizable monomers and photosensitive chiral compds., to a 1st radiation for pattern formation and (2) irradiating a 2nd radiation for photopolymn., wherein luminous intensity of the 1st radiation is low enough not to initiate the photopolymn. and luminous intensity of the 2nd radiation is at a level that the half width increase of a reflection light wave length band on each color pixel is 10% or lower. The color filter is particularly useful for a reflective LCD.

IT **370088-08-7P**

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(manufacture of cholesteric liquid crystal color filters with accurate color by controlled irradiation)

RN 370088-08-7 HCAPLUS

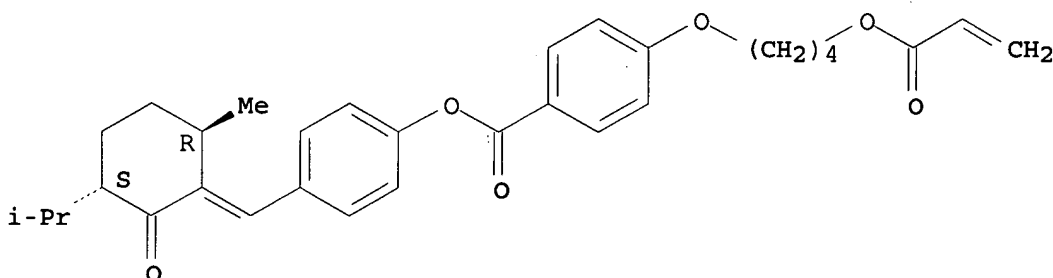
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 4-[[[(3R,6R)-6-methyl-3-(1-methylethyl)-2-oxocyclohexylidene]methyl]phenyl 4-[4-(1-oxo-2-propenyl)butoxy]benzoate, 2,6-naphthalenediyl bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 370088-07-6

CMF C31 H36 O6

Absolute stereochemistry.  
Double bond geometry unknown.

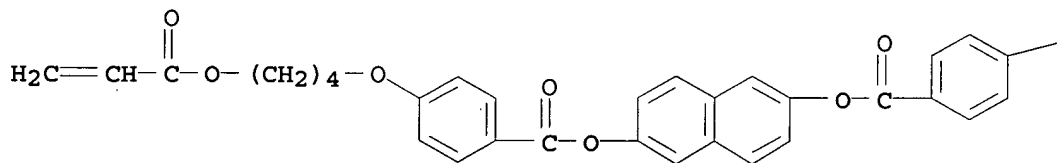


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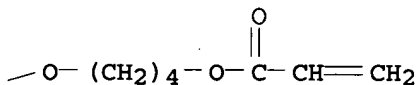
CRN 339588-79-3

CMF C38 H36 O10

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CM 3

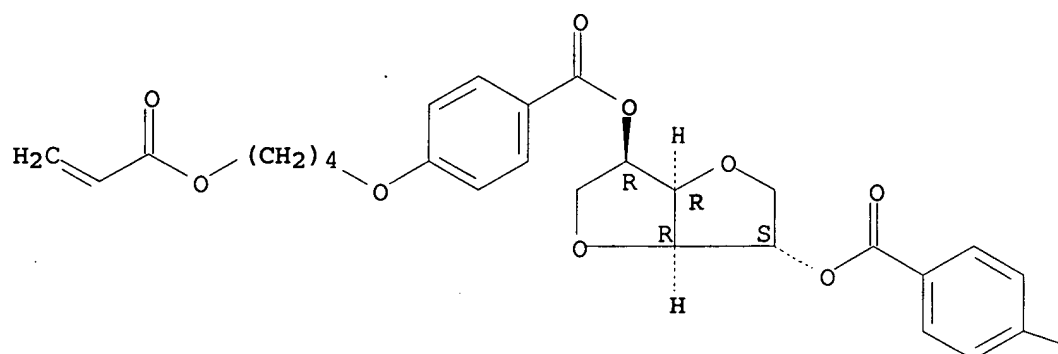
CRN 250230-59-2

CMF C34 H38 O12

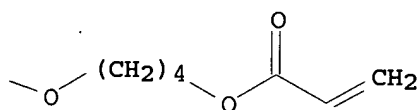


Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

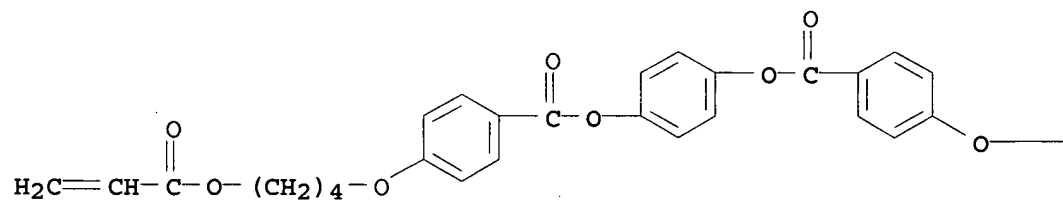


CM 4

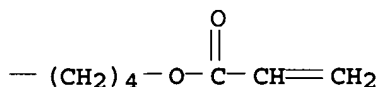
CRN 132694-65-6

CMF C34 H34 O10

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IC ICM G02B005-20  
 ICS G02F001-1335; G03F007-004; G03F007-26  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 370088-08-7P  
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP  
 (Preparation); USES (Uses)  
 (manufacture of cholesteric liquid crystal color filters with accurate  
 color by controlled irradiation)

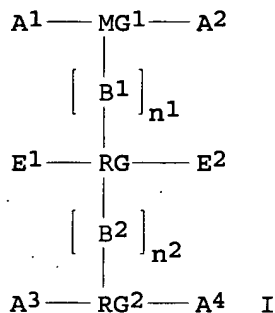
L14 ANSWER 34 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:489349 HCAPLUS  
 DOCUMENT NUMBER: 135:94272  
 TITLE: Optically active materials  
 INVENTOR(S): Cherkaoui, Zoubair Mohammed; Schmitt, Klaus  
 PATENT ASSIGNEE(S): Rolic A.-G., Switz.  
 SOURCE: PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001047862	A1	20010705	WO 2000-CH673	200012 20
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001019795	A5	20010709	AU 2001-19795	200012 20
EP 1252131	A1	20021030	EP 2000-982805	200012 20
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003519113	T	20030617	JP 2001-549336	200012

TW 587076	B	20040511	TW 2000-89128273	20
				200012
				29
US 2003028048	A1	20030206	US 2002-168137	200206
				20
US 6905739	B2	20050614		
PRIORITY APPLN. INFO.:			EP 1999-310561	A
				199912
				23
			GB 1999-30557	A
				199912
				23
			WO 2000-CH673	W
				200012
				20

OTHER SOURCE(S):            MARPAT 135:94272  
GI



AB A compound is of formula I, in which: A1 to A4, E1 and E2 each independently represent hydrogen or an optionally-substituted hydrocarbon group; B1 and B2 each independently represent a single bond, an oxygen atom or an optionally-substituted hydrocarbon group; MG1 and MG2 each independently represent an optionally-substituted ring system; CG is a divalent or polyvalent chiral group. The optically active compound may be used as a doping agent for liquid crystals for a wide range of applications including solid state cholesteric filters for projection displays, circular polarizers, optical filters, etc. An example of the active materials is diisopropyl L-2,3-bis{2,5-bis[4-(6-acryloyloxyhexyloxy)benzoyloxy]benzoyloxy)succinate.

IT 348630-23-9P

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

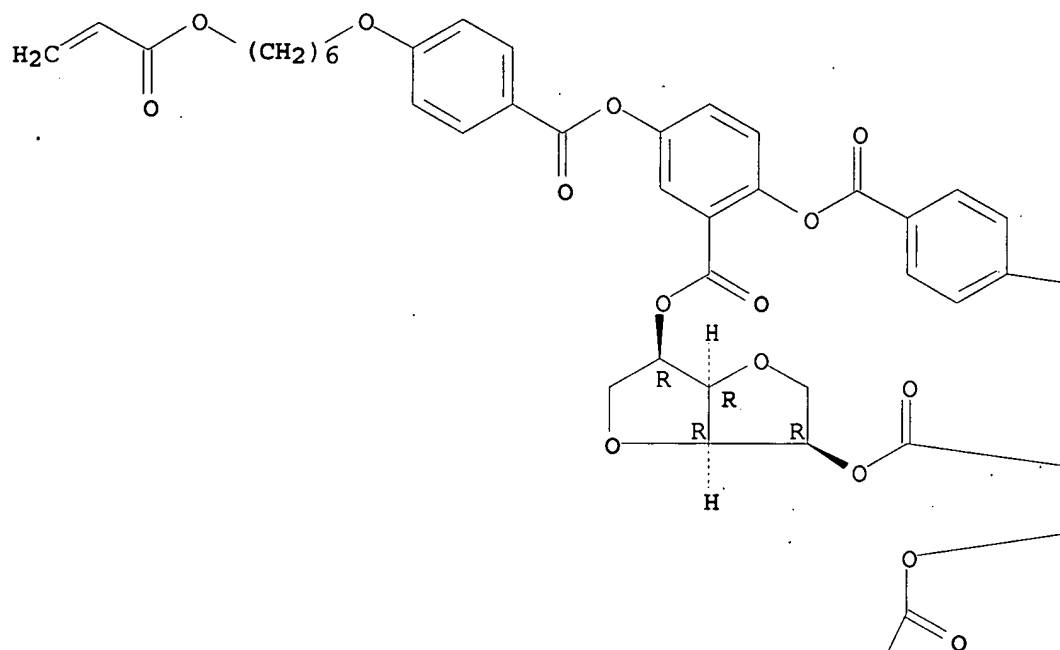
(doping agents; optically active materials and use as doping agents for liquid crystals for optical filters or polarizers)

RN 348630-23-9 HCAPLUS

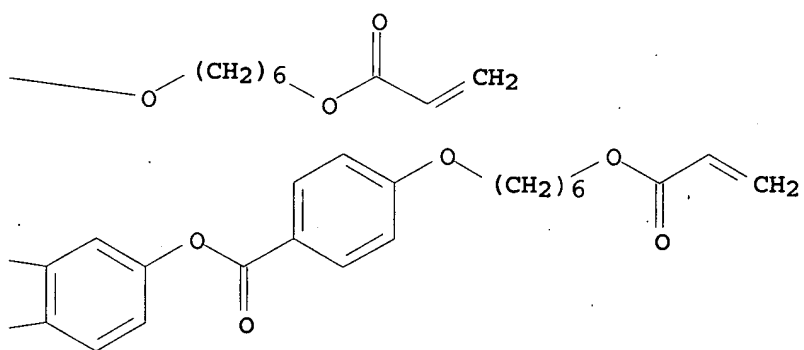
CN D-Mannitol, 1,4:3,6-dianhydro-, bis[2,5-bis[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]benzoate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

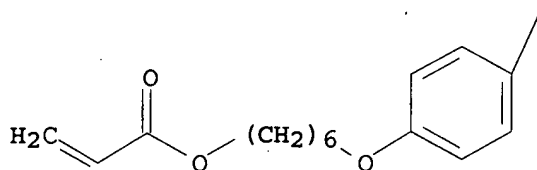
PAGE 1-A



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PAGE 2-A



IC ICM C07C069-92  
 ICS C07C069-94; C09K019-20; C09K019-58  
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 Section cross-reference(s): 38, 76  
 IT 348630-23-9P 348630-33-1P 348630-34-2P  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP  
 (Preparation)  
 (doping agents; optically active materials and use as doping  
 agents for liquid crystals for optical filters or polarizers)  
 REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L14 ANSWER 35 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:225471 HCAPLUS  
 DOCUMENT NUMBER: 134:273617  
 TITLE: Half-reflection-type color filters containing  
 chiral-nematic (cholesteric) liquid crystals  
 INVENTOR(S): Inoue, Koji; Ichihashi, Mitsuyoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001083500	A	20010330	JP 1999-255891	199909 09
PRIORITY APPLN. INFO.:			JP 1999-255891	199909 09

AB The process comprise imagewise exposure of photosensitive resin  
 layers (A) on transparent substrates, lamination of  
 cholesteric-liquid-crystal-layer (B)-formed flexible supports with the  
 substrates, heat orientation, delamination, solvent treatment for  
 removal of residues of A from non-exposed support area, and heat  
 treatment. Thermoplastic resin layers and internal layers may be  
 arranged between the flexible supports and B. The process provides  
 color filters with high color purity, good thickness uniformity, and  
 less material loss.  
 IT 331841-86-2  
 RL: DEV (Device component use); PEP (Physical, engineering or  
 chemical process); PROC (Process); USES (Uses)  
 (polarizing layers; half-reflection-type color filters containing

chiral-nematic liquid crystals and showing good color purity and thickness uniformity)

RN 331841-86-2 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI)  
(CA INDEX NAME)

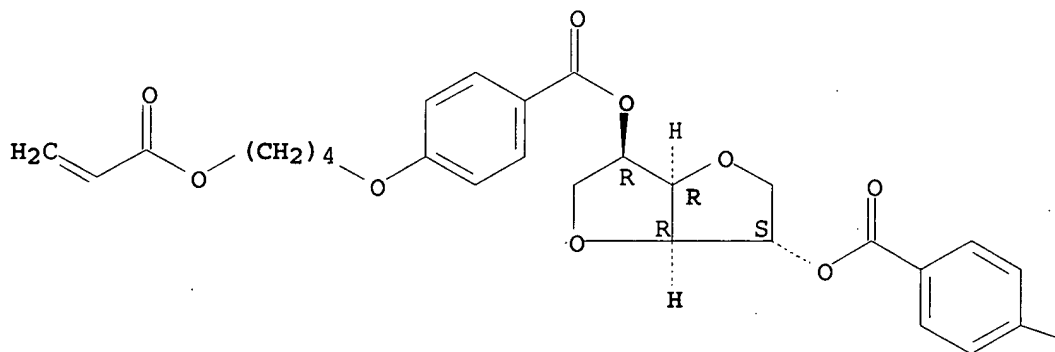
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CRN 250230-59-2

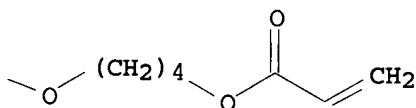
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

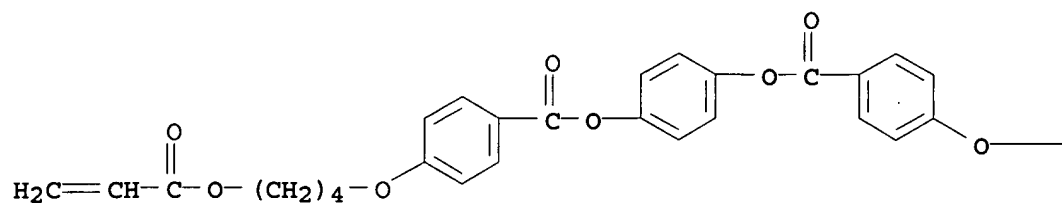


CM 2

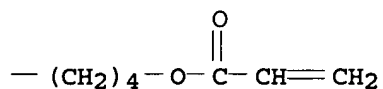
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CMF C34 H34 O10

PAGE 1-A



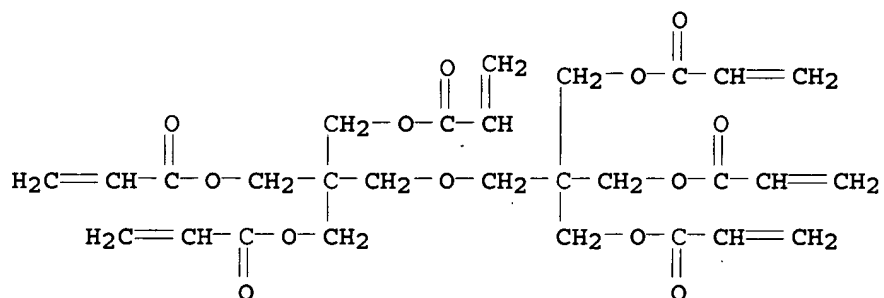
PAGE 1-B



CM 3

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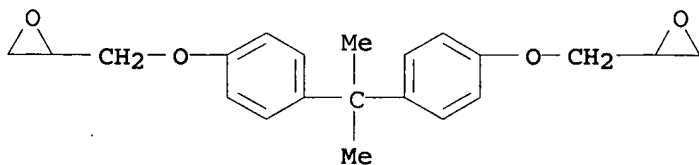
CMF C28 H34 O13



CM 4

CRN 1675-54-3

CMF C21 H24 O4



IC ICM G02F001-1335  
ICS G02B005-20

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 73, 75  
 IT 331841-86-2  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (polarizing layers; half-reflection-type color filters containing chiral-nematic liquid crystals and showing good color purity and thickness uniformity)

L14 ANSWER 36 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:152349 HCAPLUS

DOCUMENT NUMBER: 134:215185

TITLE: Cholesteric layered materials with improved color properties and their production and use  
 INVENTOR(S): Prechtl, Frank; Schneider, Norbert; Meyer, Frank; Parker, Robert; Richter, Volker; Heilmann, Peter; Koch, Volker; Schuhmacher, Peter

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: Eur. Pat. Appl., 42 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1078975	A1	20010228	EP 2000-118522	200008 25
EP 1078975	B1	20031029		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19940682	A1	20010301	DE 1999-19940682	199908 27
CA 2316623	A1	20010227	CA 2000-2316623	200008 24
JP 2001172329	A	20010626	JP 2000-255434	200008 25
US 6605235	B1	20030812	US 2000-648369	200008 25
AT 253105	T	20031115	AT 2000-118522	200008 25
PT 1078975	T	20040331	PT 2000-118522	200008 25
ES 2209737	T3	20040701	ES 2000-118522	200008 25
PRIORITY APPLN. INFO.:			DE 1999-19940682	A 199908 27



AB Cholesteric layered materials comprising  $\geq 1$  three-dimensionally crosslinked oriented cholesteric film are described in which a homogeneous interference pattern is observed over essentially the complete thickness of the layer(s). Methods for producing the materials are described which entail applying a cholesteric coating material which includes  $\geq 1$  crosslinkable substance to a support which is inert to the coating material to form and orient a cholesteric layer, drying and curing the layer under conditions which produce the desired interference pattern, and separating the layer from the support (optionally followed by the application of further layers over the resulting film). Use of the materials as pigments for a variety of applications and in polarizers is also described.

IT 252010-00-7P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(crosslinked cholesteric layered materials with improved color properties and their production and use)

RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

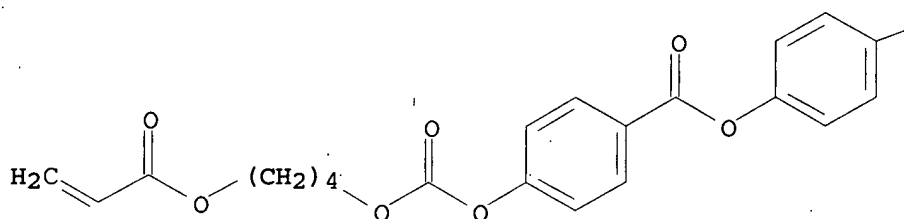
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CRN 223572-88-1

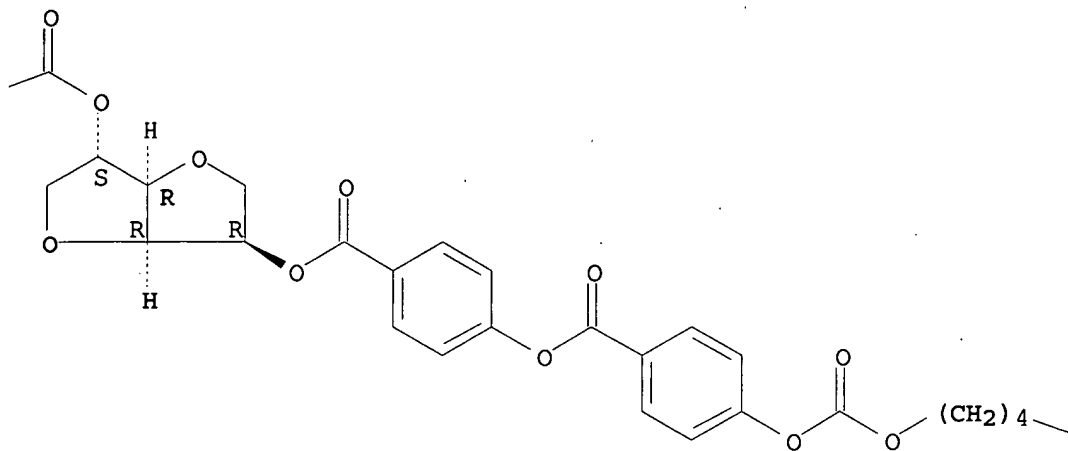
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Absolute stereochemistry.

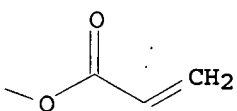
PAGE 1-A



PAGE 1-B



PAGE 1-C

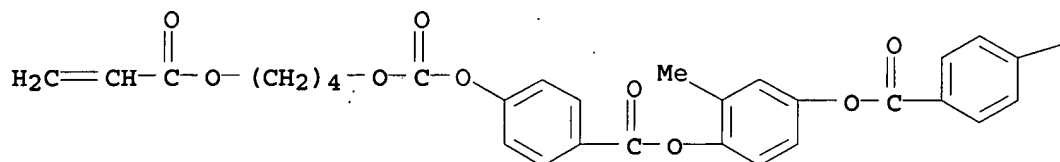


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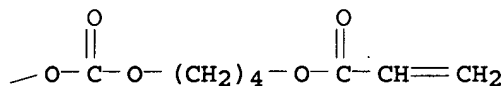
CRN 187585-64-4

CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM C09K019-00  
ICS C09B067-00; C09D005-36  
CC 75-11 (Crystallography and Liquid Crystals)  
Section cross-reference(s): 41, 73  
IT 252010-00-7P  
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)  
(crosslinked cholesteric layered materials with improved color properties and their production and use)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 37 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:152348 HCAPLUS  
DOCUMENT NUMBER: 134:215184  
TITLE: Cholesteric layered material with improved color stability and method for producing the same  
INVENTOR(S): Precht1, Frank; Schneider, Norbert; Meyer, Frank; Blaschka, Peter; Haremza, Sylke; Hezel, Tilmann; Parker, Robert; Richter, Volker  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
SOURCE: Eur. Pat. Appl., 39 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1078974	A1	20010228	EP 2000-118521	20000825
EP 1078974	B1	20040303		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19940681	A1	20010301	DE 1999-19940681	199908

CA 2316702	A1	20010227	CA 2000-2316702	27
				200008
				24
JP 2001154024	A	20010608	JP 2000-255435	200008
				25
AT 260963	T	20040315	AT 2000-118521	200008
				25
US 6850310	B1	20050201	US 2000-648368	200008
				25
PRIORITY APPLN. INFO.:		DE 1999-19940681	A	199908
				27

AB Cholesteric layered materials comprising  $\geq 1$  three-dimensionally crosslinked oriented cholesteric film are described in which external stimuli produce no visible shift in color of the layer(s). Methods for producing the materials are described which entail applying a cholesteric coating material which includes  $\geq 1$  crosslinkable substance to a support which is inert to the coating material to form and orient a cholesteric layer, drying and curing the layer under conditions which ensure the absence of visible shifts in color in response to external stimuli, and separating the layer from the support (optionally followed by the application of further layers over the resulting film). Use of the materials as pigments for a variety of applications and in polarizers is also described.

IT 328247-73-0P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)  
(crosslinked cholesteric layered materials with improved color properties and their production and use)

RN 328247-73-0 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

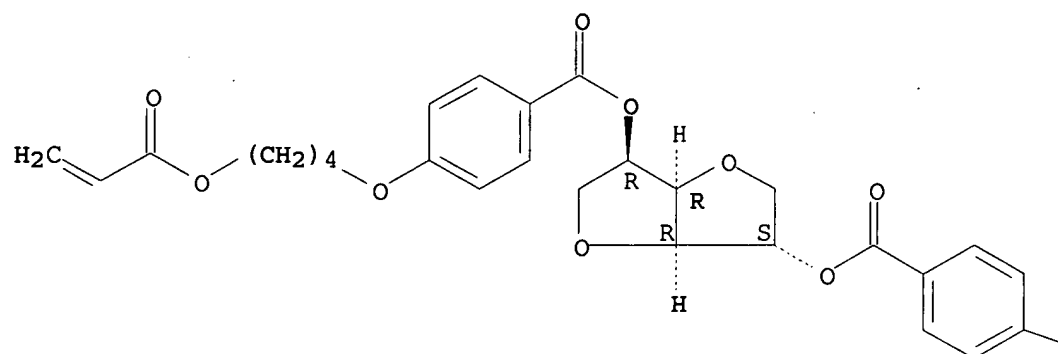
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CRN 250230-59-2

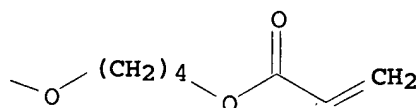
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



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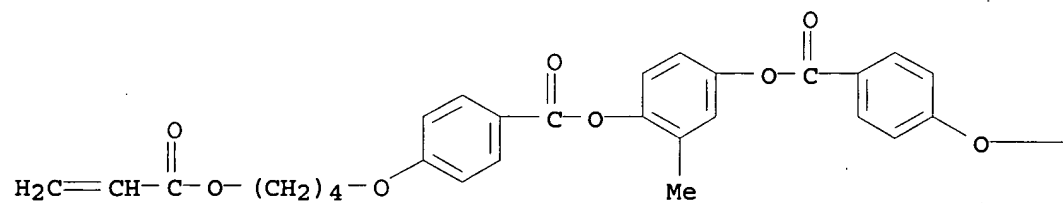


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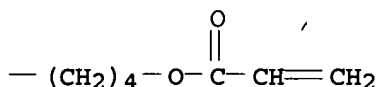
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B

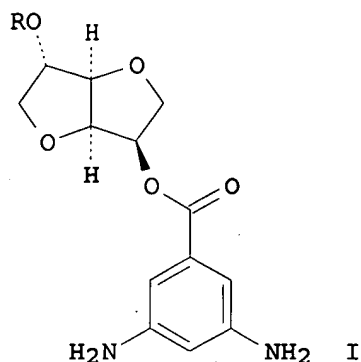


IC ICM C09K019-00  
ICS C09B067-00; C09D005-36  
CC 75-11 (Crystallography and Liquid Crystals)  
Section cross-reference(s): 41, 73  
IT 328247-73-0P  
RL: DEV (Device component use); IMF (Industrial manufacture); PRP  
(Properties); PREP (Preparation); USES (Uses)  
(crosslinked cholesteric layered materials with improved color  
properties and their production and use)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L14 ANSWER 38 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2001:54328 HCAPLUS  
DOCUMENT NUMBER: 134:123656  
TITLE: Liquid crystal alignment agent, chiral nematic  
liquid crystal color filter, and formation of  
the filter  
INVENTOR(S): Nigorikawa, Kazunori; Ichihashi, Mitsuyoshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001019766	A	20010123	JP 1999-190419	199907 05
PRIORITY APPLN. INFO.:				199907 05

GI



AB The liquid crystal alignment agent is made of polyimide prepared from 3,5-diaminobenzoate ester I (R = alkyl, alkanoyl, benzoyl) and tetracarboxylic dianhydride. The color filter has a film made of the liquid crystal alignment agent on a transparent substrate and a photosensitive resin layer containing a chiral nematic liquid crystal on the alignment layer. The color filter is manufactured by transferring the photosensitive layer on the liquid crystal-alignment film. The chiral nematic liquid crystal is uniformly aligned in the horizontal direction in the color filter.

IT 320750-52-5

RL: DEV (Device component use); USES (Uses)

(manufacture of color filter by transferring photosensitive resin containing chiral nematic liquid crystal on polyimide alignment layer)

RN 320750-52-5 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

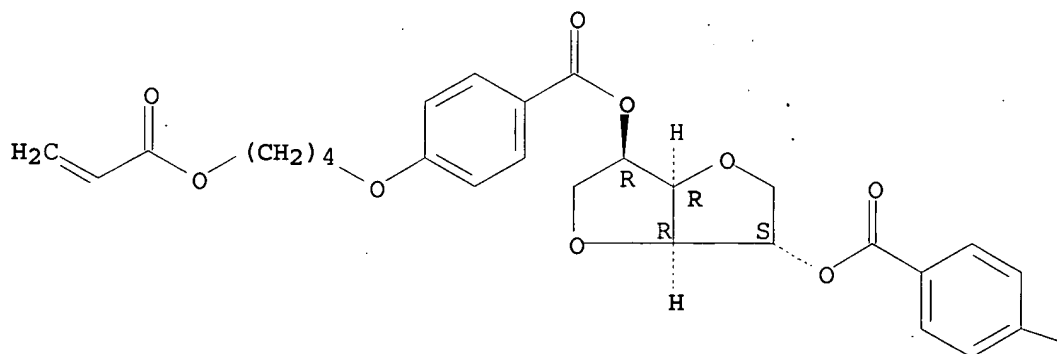
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CRN 250230-59-2

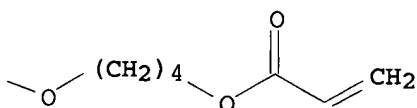
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

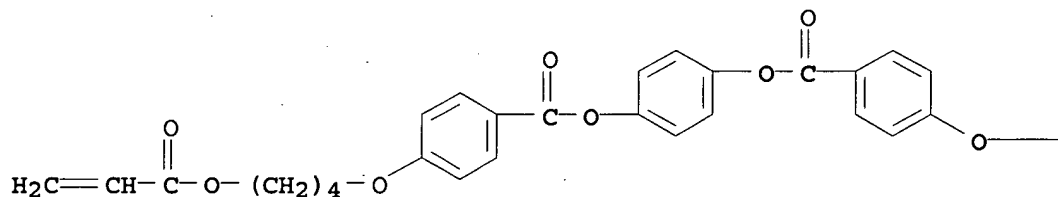


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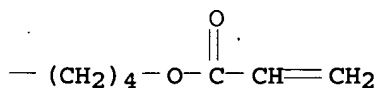
CRN 132694-65-6

CMF C34 H34 O10

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PAGE 1-B



IC ICM C08G073-10

ICS G02F001-1337

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 75

IT 320750-52-5

RL: DEV (Device component use); USES (Uses)

(manufacture of color filter by transferring photosensitive resin containing chiral nematic liquid crystal on polyimide alignment layer)

L14 ANSWER 39 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:36117 HCAPLUS

DOCUMENT NUMBER: 134:107902



TITLE: Photopolymerizable cholesteric liquid crystals.  
New materials for holographic applications

AUTHOR(S): Theissen, Ulrich; Zilker, Stephan J.; Pfeuffer, Thomas; Strohmriegl, Peter

CORPORATE SOURCE: Physikalisches Institut und BIMF, Universitat Bayreuth, Bayreuth, D-95440, Germany

SOURCE: Advanced Materials (Weinheim, Germany) (2000), 12(22), 1698-1700  
CODEN: ADVMEW; ISSN: 0935-9648

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel photopolymer based on a cholesteric liquid crystalline (CLC) mixture is presented. The mixture yielded holograms even for uniform illumination with light. Selective reflection properties were used by applying a polarization recording scheme using orthogonal writing beams. The writing beam had a circular polarization state and the polarization of the reading beam remained unchanged in the transmitted and diffracted beams.

IT 320341-13-7P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(photopolymerizable cholesteric liquid crystals for holog. applications)

RN 320341-13-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis[4-[[2-methyl-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] 4,4'-[oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl]oxy]bis[benzoate] and 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

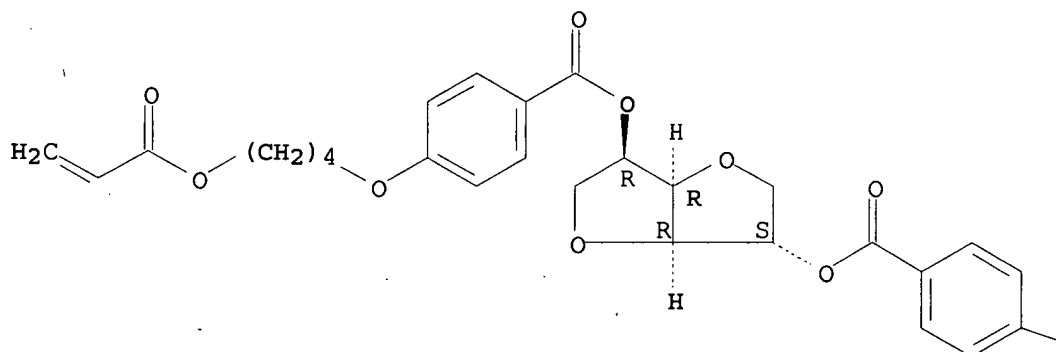
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CRN 250230-59-2

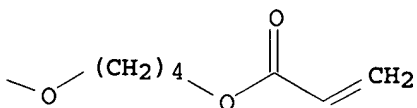
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



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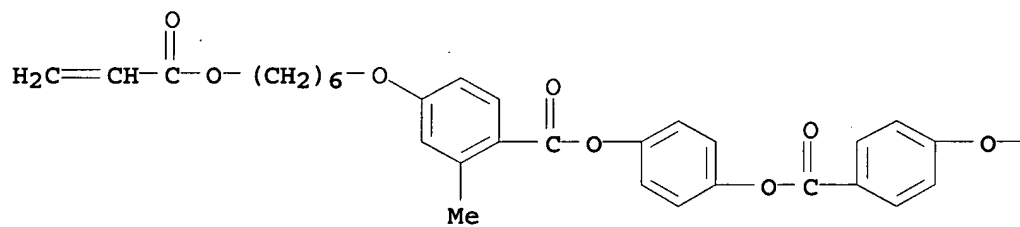


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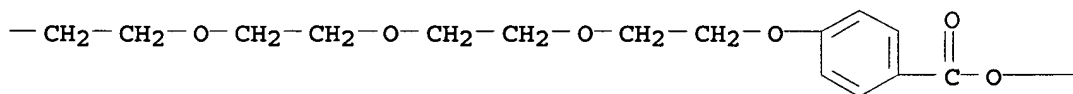
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CMF C68 H74 O19

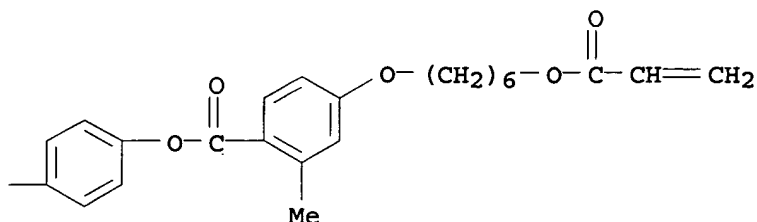
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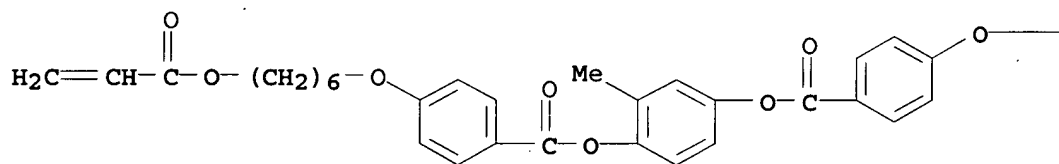
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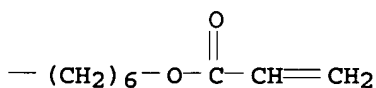
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CRN 125248-71-7  
CMF C39 H44 O10

PAGE 1-A



PAGE 1-B



CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 36, 75

IT 320341-13-7P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(photopolymerizable cholesteric liquid crystals for holog applications)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 40 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:31035 HCAPLUS

DOCUMENT NUMBER: 134:93442

TITLE: Manufacture of color filters having excellent accuracy of layer thickness by dry process

INVENTOR(S): Wakata, Yuichi; Ichihashi, Mitsuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION: .

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001004824	A	20010112	JP 1999-177106	19990623
PRIORITY APPLN. INFO.:			JP 1999-177106	19990623

AB The process involves (i) laminating transfer materials having cholesteric liquid crystalline layers on temporary supports and light-transmitting substrates, (ii) imagewise heating, and (iii) peeling the transfer materials from the substrates to form necessary images. Also disclosed is a process employing temporary substrates having image receiving layers whereon images are formed as above then are transferred again to light-transmitting substrates. Loss of materials can be reduced.

IT 318236-54-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of cholesteric liquid crystal color filters having excellent accuracy of layer thickness by dry process)

RN 318236-54-3 HCAPLUS

CN D-Glucitol, 1,4:3,5-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

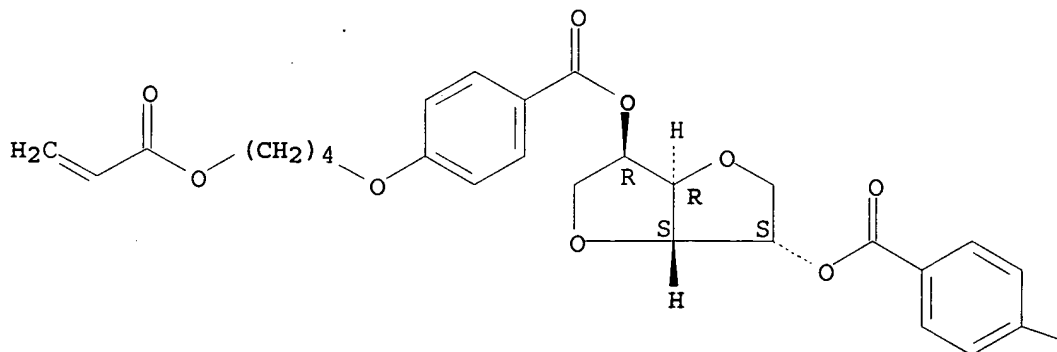
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CRN 318236-53-2

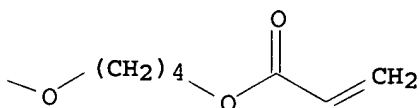
CMF C34 H38 O12

Relative stereochemistry.

PAGE 1-A



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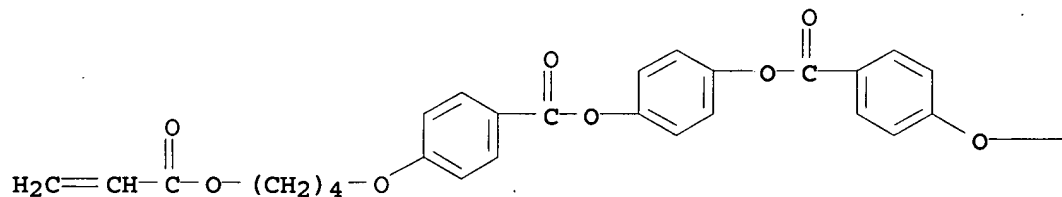


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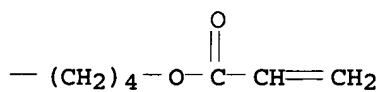
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CMF C34 H34 O10

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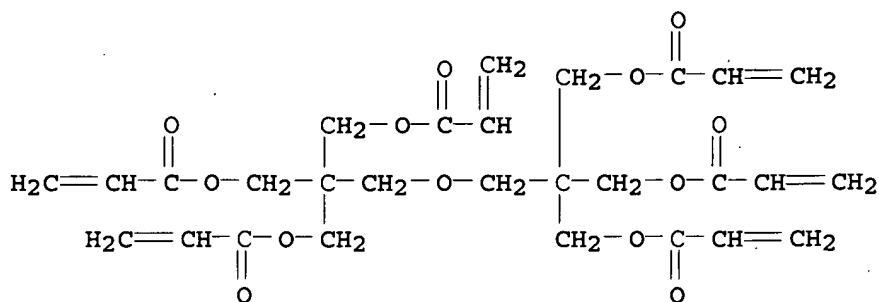
PAGE 1-B



CM 3

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B005-20  
ICS G02F001-1335; G09F009-30  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 318236-54-3P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of cholesteric liquid crystal color filters having excellent accuracy of layer thickness by dry process)

L14 ANSWER 41 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2000:592794 HCAPLUS  
DOCUMENT NUMBER: 133:178983  
TITLE: Cholesteric layered material and method for producing the same for pigments  
INVENTOR(S): Schuhmacher, Peter; Schneider, Norbert; Richter, Volker; Best, Wolfgang; Kohl, Albert; Blaschka, Peter; Sierakowski, Claudia  
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany  
SOURCE: PCT Int. Appl., 42 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000049105	A1	20000824	WO 2000-EP1303	20000217
W: AU, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19906589	A1	20000824	DE 1999-19906589	19990217
EP 1155097	A1	20011121	EP 2000-909198	20000217
EP 1155097	B1	20050112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002537149	T	20021105	JP 2000-599836	

AU 772154	B2	20040408	AU 2000-31563	200002 17
US 2003085380	A1	20030508	US 2002-285078	200002 17
US 6656543	B2	20031202		200211 01
PRIORITY APPLN. INFO.:			DE 1999-19906589	A 199902 17
			WO 2000-EP1303	W 200002 17
			US 2001-926026	B1 200108 16

AB The invention relates to novel cholesteric layered materials with the layer sequence A1/B/A2, A1 and A2 being the same or different and each comprising at least one cholesteric layer and B representing at least one intermediate layer which separates the layers A1 and A2 from each other. The inventive cholesteric layered materials are characterized in that layer B is an adhesive layer, such as heat- or pressure-sensitive adhesives. The invention also relates to cholesteric multilayered pigments which can be produced from these cholesteric layered materials, to methods for producing them and to their use.

IT 288621-48-7P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(cholesteric multilayer pigments having core layers of heat- or pressure-sensitive adhesives for manufacture of pigments)

RN 288621-48-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with 2-methyl-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-methyl-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-methyl-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

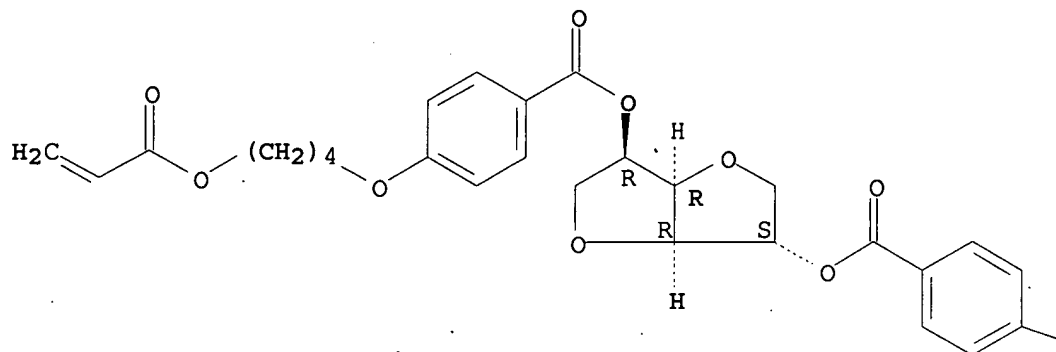
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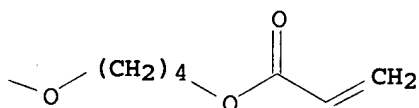
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

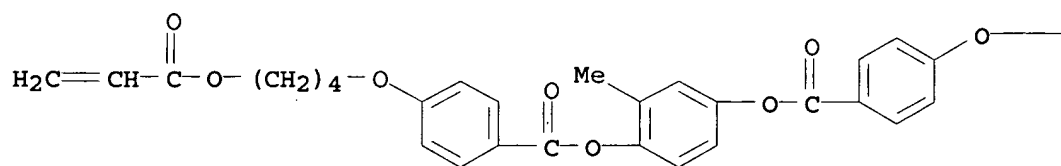


CM 2

CRN 172258-12-7

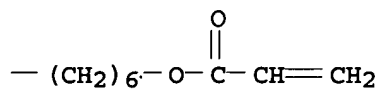
CMF C37 H40 O10

PAGE 1-A





PAGE 1-B

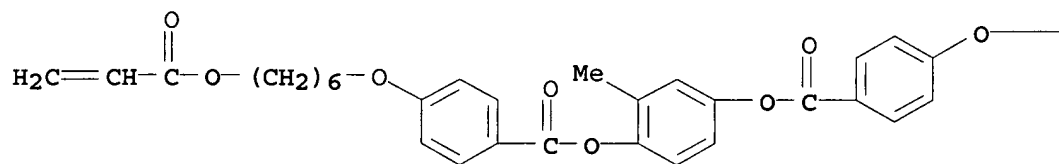


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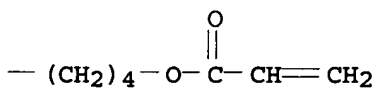
CRN 172258-10-5

CMF C37 H40 O10

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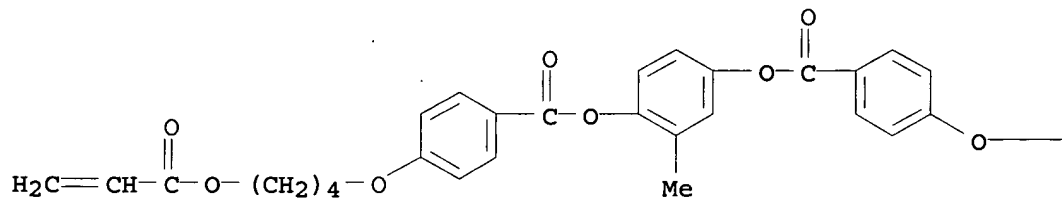


CM 4

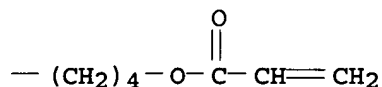
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B

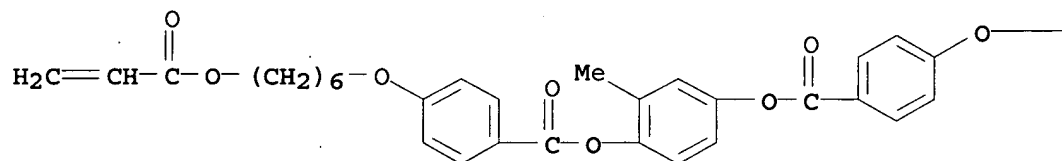


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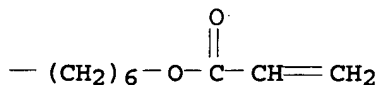
CRN 125248-71-7

CMF C39 H44 O10

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IC ICM C09K019-00

ICS C09D005-36; C09B067-00

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 75

IT 288621-48-7P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(cholesteric multilayer pigments having core layers of heat- or pressure-sensitive adhesives for manufacture of pigments)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 42 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:441890 HCAPLUS

DOCUMENT NUMBER: 133:81645

TITLE: Utilization of polymerizable liquid crystal substances for the production of optical components

INVENTOR(S): Meyer, Frank; Schneider, Norbert; Schuhmacher, Peter

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 39 pp.

DOCUMENT TYPE: CODEN: PIXXD2  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: German  
 PATENT INFORMATION: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037585	A1	20000629	WO 1999-EP10294	19991222
W: CH, DE, GB, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19859584	A1	20000629	DE 1998-19859584	19981222
EP 1144547	A1	20011017	EP 1999-968369	19991222
EP 1144547	B1	20030903		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002533742	T	20021008	JP 2000-589644	19991222
US 2003219548	A1	20031127	US 2003-430322	20030507
US 6773766	B2	20040810		
PRIORITY APPLN. INFO.:				
			DE 1998-19859584	A 19981222
			WO 1999-EP10294	W 19991222
			US 2001-857216	B1 20010622

## OTHER SOURCE(S): MARPAT 133:81645

AB The invention relates to the utilization of polymerizable liquid crystal compds., Z1Y1A1Y3MY4A2Y2Z2 (Z1, Z2 = polymerizable group; Y1-4 = single bond, O, S, OCO, etc.; A1, A2 = C2-30-spacer; M = mesogen), for the production of optical elements having color and polarization-selective reflection and to optical elements containing said compds. in monomeric or polymerized form.

## IT 252010-00-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (utilization of polymerizable liquid crystal substances for the production of optical components)

## RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

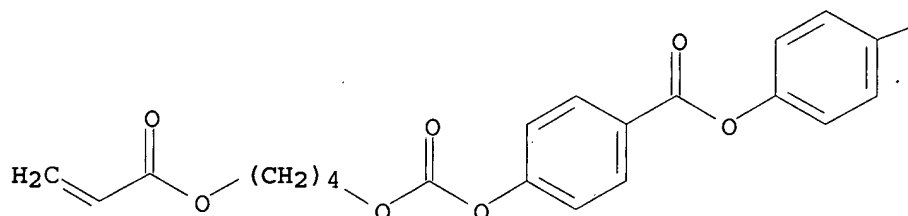
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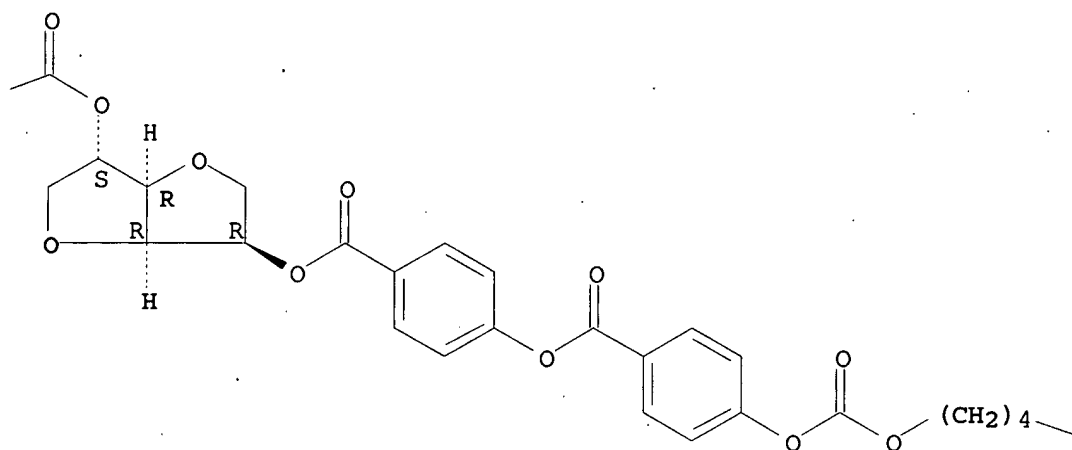
CMF C50 H46 O20

Absolute stereochemistry.

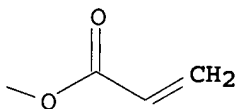
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PAGE 1-B



PAGE 1-C

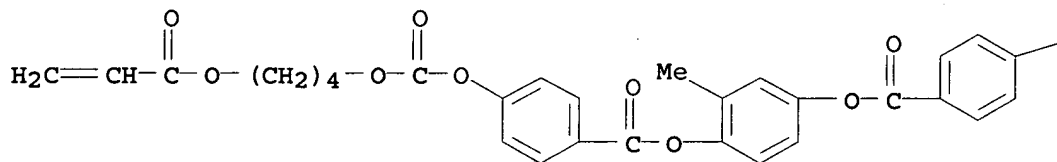


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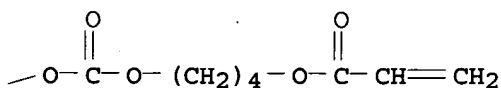
CRN 187585-64-4

CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



IC ICM C09K019-20

ICS C09K019-58; C09K019-38

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73, 75

IT 252010-00-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

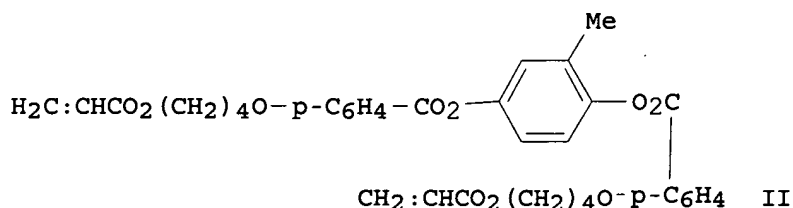
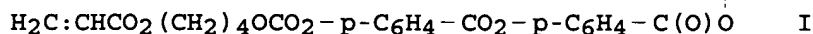
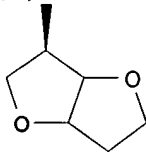
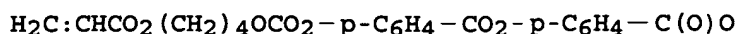
(utilization of polymerizable liquid crystal substances for the production of optical components)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L14 ANSWER 43 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:783699 HCAPLUS  
 DOCUMENT NUMBER: 132:26668  
 TITLE: Use of cholesteric liquid crystalline  
 compositions as UV filters in cosmetic and  
 pharmaceutical preparations  
 INVENTOR(S): Schumacher, Peter; Schneider, Norbert;  
 Westenfelder, Horst; Haremza, Sylke; Habeck,  
 Thorsten; Meyer, Frank  
 PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
 SOURCE: Eur. Pat. Appl., 39 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 962222	A2	19991208	EP 1999-110683	199906 02
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19824972	A1	19991209	DE 1998-19824972	199806 04
AU 9933156	A	19991216	AU 1999-33156	199906 03
AU 759300	B2	20030410		
JP 2000044451	A	20000215	JP 1999-156776	199906 03
US 6060042	A	20000509	US 1999-324712	199906 03
CN 1243701	A	20000209	CN 1999-109894	199906 04
BR 9907308	A	20001219	BR 1999-7308	199906 04
PRIORITY APPLN. INFO.:			DE 1998-19824972	A 199806 04

GI



AB Sunscreens are provided which contain, as UV filter compds., polymers comprising  $\geq 1$  chiral, liquid-crystalline, polymerizable monomer  $[\text{Z1Y1}(\text{A1})\text{mY2M1Y3}]\text{nX}$  [ $\text{A1} = \text{C1-30}$  spacer;  $\text{Y1-Y3} = \text{bond, O, S, C(O)O, OC(O), CH:CHC(O)O, OC(O)O, C(O)NR, RNC(O), CH2O, OCH2, CH:N, N:CH, N:N}$ ;  $\text{M1} = \text{mesogenic group}$ ;  $\text{R} = \text{H, C1-4 alkyl}$ ;  $\text{Z1} = \text{H, C1-4 alkyl, polymerizable group, residue bearing a polymerizable group}$ ;  $\text{X} = \text{n-valent chiral residue}$ ;  $\text{m} = 0, 1$ ;  $\text{n} = 1-6$ ] forming a cholesteric liquid-crystalline phase with a periodicity of  $<450$  nm, alone or mixed with  $\text{Z2Y4}(\text{A2})\text{oY5M2Y6}(\text{A3})\text{pY7Z3}$  [ $\text{A2, A3} = \text{C1-30}$  spacer;  $\text{Y4-Y7} = \text{bond, O, S, C(O)O, OC(O), CH:CHC(O)O, OC(O)O, C(O)NR1, RNC(O), CH2O, OCH2, CH:N, N:CH, N:N}$ ;  $\text{M2} = \text{mesogenic group}$ ;  $\text{R1} = \text{H, C1-4 alkyl}$ ;  $\text{Z2, Z3} = \text{p-C6H4-, C1-4 alkyl, polymerizable group, residue bearing a polymerizable group}$ ;  $\geq 1$  of  $\text{Z2, Z3}$  is or contains a polymerizable group].  $\text{M1-M3}$  are e.g. (substituted)  $\text{p-C6H4-C(O)O-p-C6H4}$ ,  $\text{p-C6H4-OC(O)-p-C6H4}$ ,  $\text{p-C6H4-p-C6H4}$ ,  $\text{p-C6H4-C(O)O-p-C6H4-OC(O)-p-C6H4}$ , or  $\text{p-C6H4-C(O)O-p-C6H4-p-C6H4-OC(O)-p-C6H4}$ .  $\text{X}$  is especially a THF or hexahydrofuro[3,2-b]furan isomer derivative. The compns. are useful as UV reflectors and UV stabilizers. Thus, a cholesteric liquid-crystalline mixture of chiral monomer I 5.2, achiral nematic monomer II 94.8, and 1-hydroxycyclohexyl Ph ketone (photoinitiator) 2 weight% was dissolved in Me Et ketone, spread on PET carrier film, dried, polymerized and crosslinked by UV irradiation, and the polymer was separated from the carrier film, ground, and sieved to produce pigment particles  $<50$   $\mu\text{m}$  in size. A sunblocker contained these pigment particles 5.00, octyl methoxycinnamate 10.00, ethoxylated hydrogenated castor oil 6.50,  $\text{TiO}_2$  6.00, mineral oil 5.00, isoamyl p-methoxycinnamate 5.00, propylene glycol 5.00, jojoba oil 3.00, 4-methylbenzylidenecamphor 3.00, PEG/dodecyl glycol copolymer 2.00, dimethicone 1.00, tocopheryl acetate 0.50, phenoxyethanol 0.50, EDTA 0.20, and  $\text{H}_2\text{O}$  to 100 weight%.

IT 252009-99-7 252010-00-7 252010-02-9

RL: BUU (Biological use, unclassified); BIOL (Biological study);

USES (Uses)

(use of cholesteric liquid crystalline compns. as UV filters in cosmetic and pharmaceutical preps.)

RN 252009-99-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-

propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with  
2-methyl-1,4-phenylene bis[4-[4-[(1-oxo-2-  
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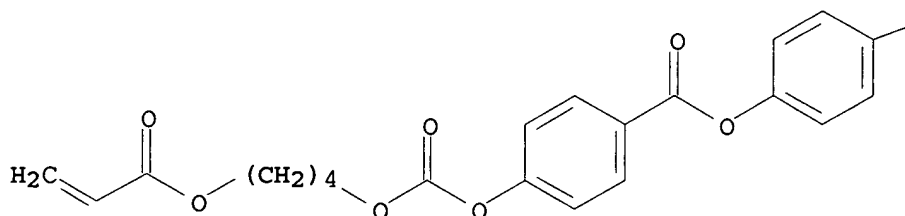
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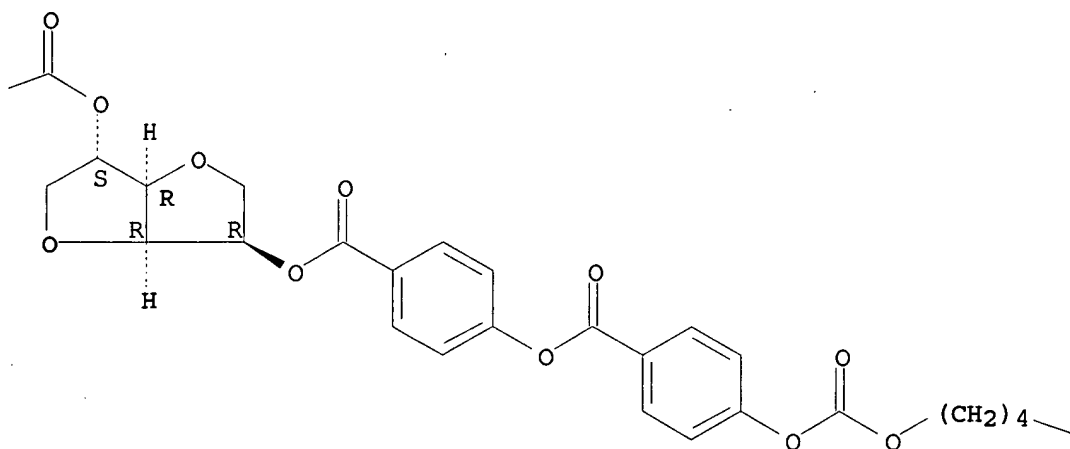
CMF C50 H46 O20

Absolute stereochemistry.

PAGE 1-A

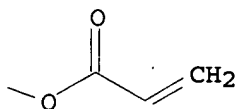


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PAGE 1-C

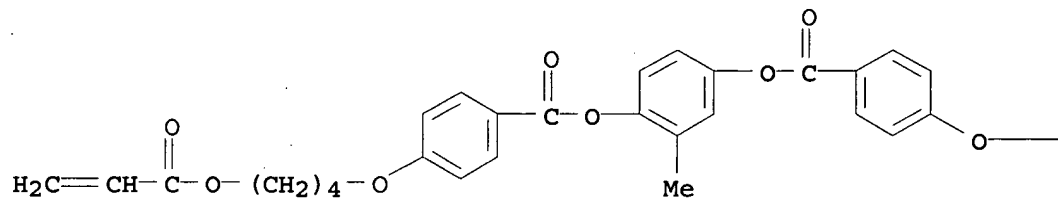


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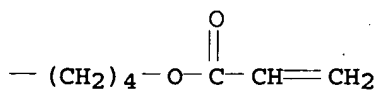
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



RN 252010-00-7 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

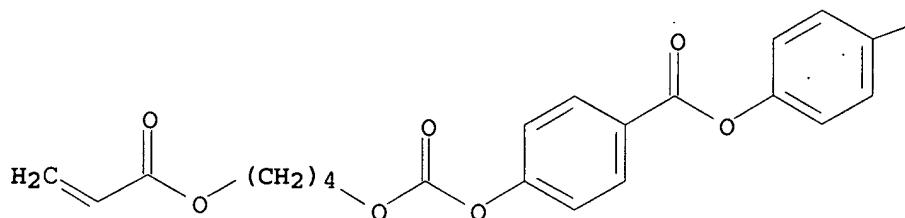
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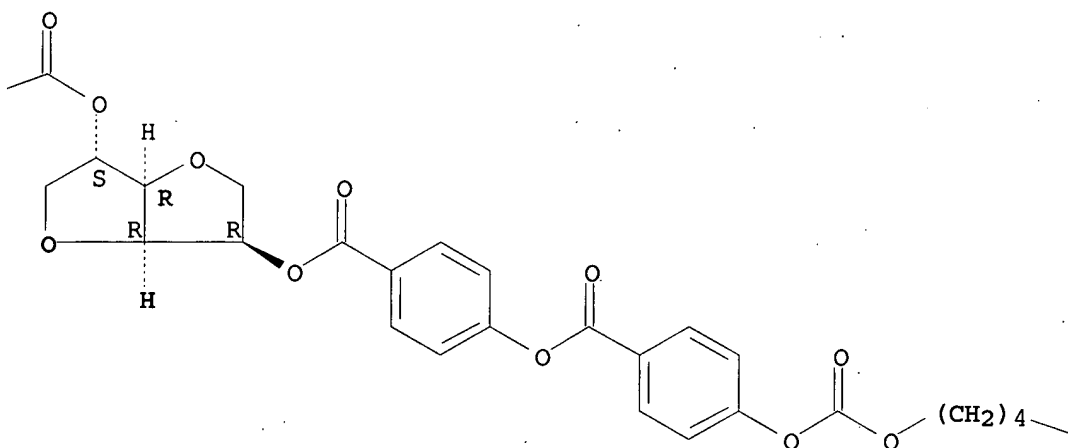
CMF C50 H46 O20

Absolute stereochemistry.

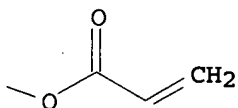
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PAGE 1-B



PAGE 1-C

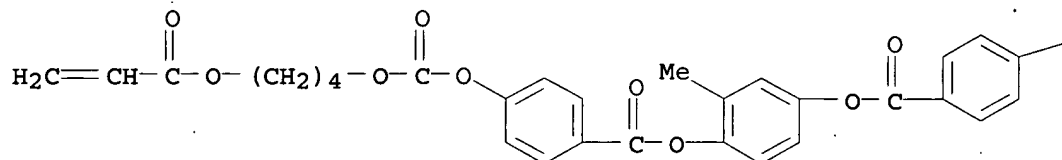


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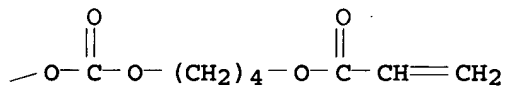
CRN 187585-64-4

CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



RN 252010-02-9 HCAPLUS

CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, (3R,6R)-hexahydrofuro[3,2-b]furan-3,6-diyl ester, polymer with 2-methyl-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 2-methyl-1,4-phenylene bis[4-[5-[(1-oxo-2-propenyl)oxy]pentyl]oxy]benzoate] (9CI) (CA INDEX NAME)

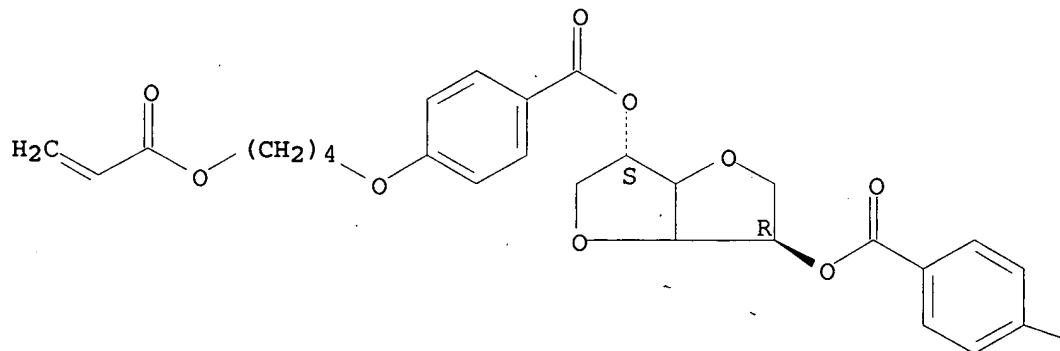
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CRN 252010-01-8

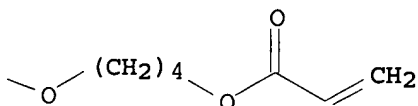
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

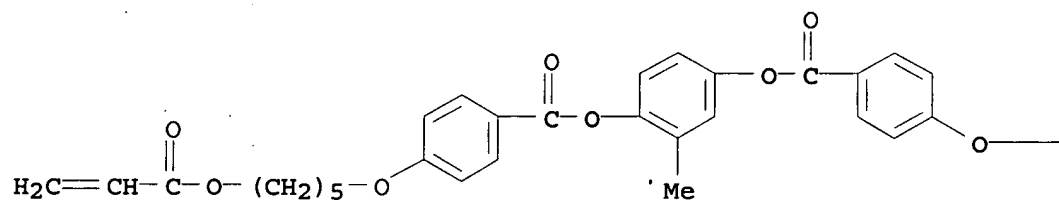


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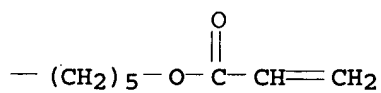
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CMF C37 H40 O10

PAGE 1-A



PAGE 1-B

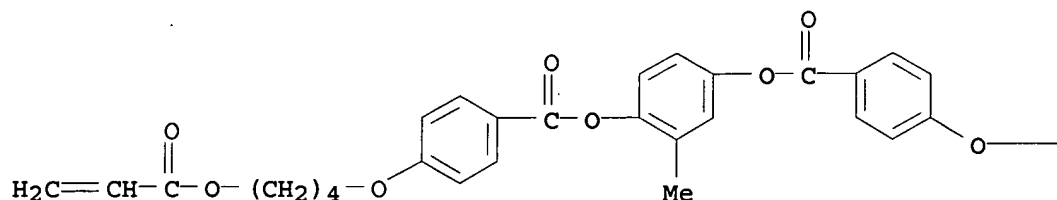


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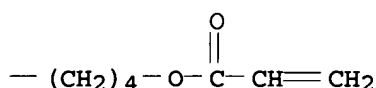
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



IC ICM A61K007-42  
 CC 62-4 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 75  
 IT 252009-99-7 252010-00-7 252010-02-9  
 RL: BUU (Biological use, unclassified); BIOL (Biological study);  
 USES (Uses)  
 (use of cholesteric liquid crystalline compns. as UV filters in cosmetic  
 and pharmaceutical prepsns.)

L14 ANSWER 44 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:723130 HCAPLUS

DOCUMENT NUMBER: 131:352613

TITLE: Multilayer cholesteric pigments, their  
preparation and useINVENTOR(S): Schuhmacher, Peter; Schneider, Norbert; Schmid,  
Raimund; Best, Wolfgang; Blaschka, Peter; Meyer,  
Frank

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9957223	A1	19991111	WO 1999-EP3106	19990506
W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, IN, JP, KR, KZ, LT, LV, MK, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19820225	A1	19991111	DE 1998-19820225	199805

AU 9939324	A	19991123	AU 1999-39324	06
				199905
				06
EP 1084209	A1	20010321	EP 1999-922185	199905
				06
EP 1084209	B1	20030903		
R: CH, DE, FR, GB, IT, LI, NL				
JP 2002513843	T	20020514	JP 2000-547180	199905
				06
US 6531221	B1	20030311	US 2000-673661	200011
				06
PRIORITY APPLN. INFO.:		DE 1998-19820225	A	199805
				06
		WO 1999-EP3106	W	199905
				06

AB A multilayer cholesteric pigment in platelet form, primarily for use in coatings, is characterized by a succession of layers A, B, and possibly C, where A and C independently represent an absorption layer which is partly transparent to light and B represents a cholesteric layer. A suitable cholesteric layer was prepared by coating an MEK solution of a mixture of chiral furo[3,2-b]furan-3,6-diol bis[4-(4-acryloyloxybutoxy)benzoate] 6.5, methylhydroquinone bis[4-( $\omega$ -acryloyloxyalkoxy)benzoate] (alkoxy = butoxy, hexyloxy) mixture 90.5, and Irgacure 184 3 parts to dry thickness 2.1  $\mu$ m on a 15- $\mu$ m poly(ethylene terephthalate) film and curing by UV irradiation. An absorption layer was prepared by dispersing carbon black in a mixture of Disperdur Phosphonate and Morthane CA 152 as binder and grinding until agglomerate-free, then coated on the cholesteric layer (thickness 0.6  $\mu$ m). The bilayer was separated from the support, flocked, and milled with NaCl to give platelets with thickness .apprx.2.7  $\mu$ m, average diameter .apprx.25  $\mu$ m, and good interlayer adhesion.

IT 250281-01-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chiral nematic layer; multilayer cholesteric pigments)

RN 250281-01-7 HCAPLUS

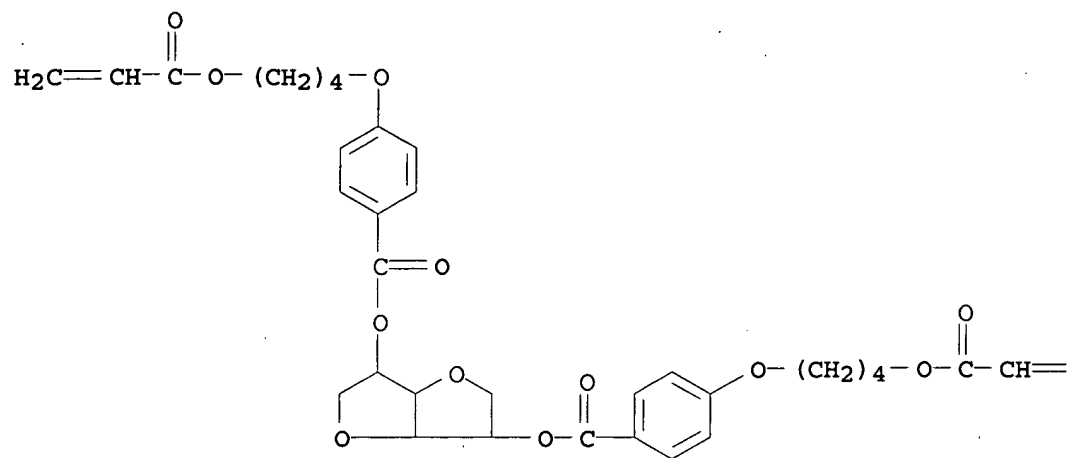
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, hexahydrofuro[3,2-b]furan-3,6-diyl ester, polymer with methyl-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-methyl-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] and 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

CRN 250281-00-6

CMF C34 H38 O12

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PAGE 1-B

 $=\text{CH}_2$ 

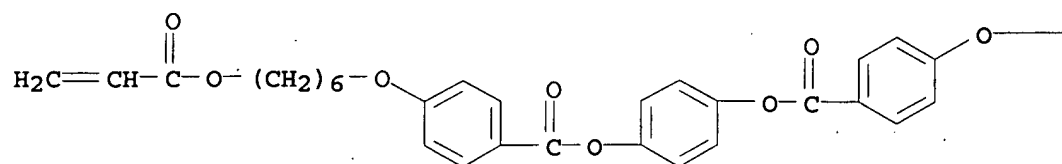
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CMF C37 H40 O10

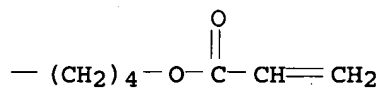
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PAGE 1-A



D1-Me

PAGE 1-B

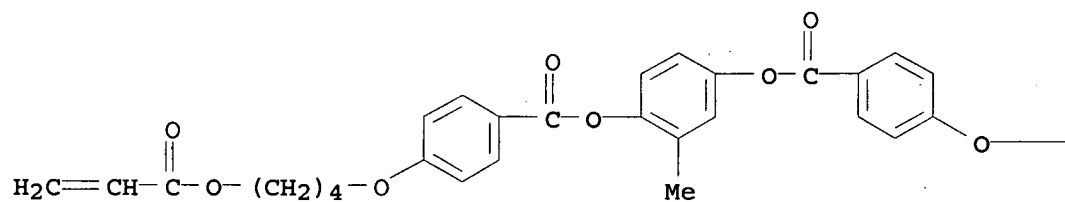


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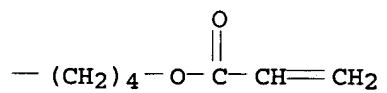
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



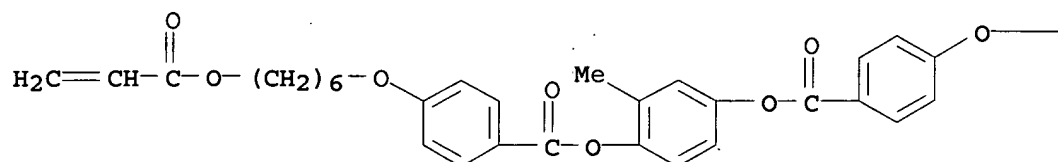
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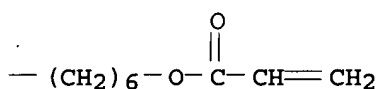
CMF C39 H44 O10



PAGE 1-A



PAGE 1-B



IC ICM C09K019-00  
ICS C09B067-00; C09D005-36  
CC 42-6 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 75  
IT 250281-01-7P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chiral nematic layer; multilayer cholesteric pigments)  
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 45 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1999:639419 HCAPLUS  
DOCUMENT NUMBER: 131:337440  
TITLE: Nematic twin molecules and their application in cholesteric polymer networks  
AUTHOR(S): Kurschner, Kathrin; Strohmriegl, Peter  
CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut für Makromolekulforschung (BIMF), Universität Bayreuth, Bayreuth, D-95440, Germany  
SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1999), 332, 2727-2735  
CODEN: MCLCE9; ISSN: 1058-725X  
PUBLISHER: Gordon & Breach Science Publishers  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Nematic twin monomers were prepared in which three Ph rings are linked by ester bonds and connected by a flexible tetraethylene glycol spacer and Me and methoxy substituents in the mesogenic core. The substituents in the mesogenic core lead to glass forming materials. Cholesteric mixts. of nematic twins and a highly twisting sorbitol derivative were crosslinked by in-situ photopolymerization, whereby the LC-structure of the monomers is permanently fixed in the network. UV/VIS spectra of the networks show the dependence of reflection wavelength on content of chiral monomer and on polymerization temperature  
IT 250230-60-5P 250230-61-6P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis and phase transition of Me- and/or MeO-Ph ester-tetraethylene glycol nematic twin monomers and photopolymn. with sorbitol acrylate and rod mols. to obtain cholesteric polymer networks)

RN 250230-60-5 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], polymer with bis[4-[3-methoxy-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] 4,4'-[oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl]bis[benzoate] and 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

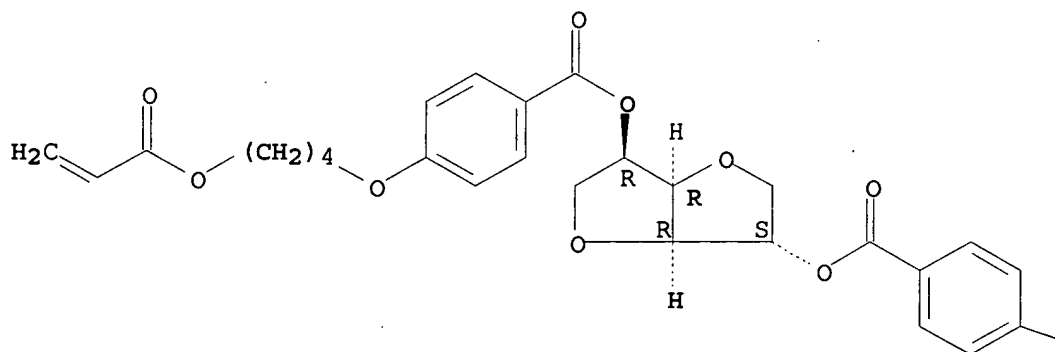
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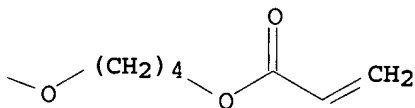
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

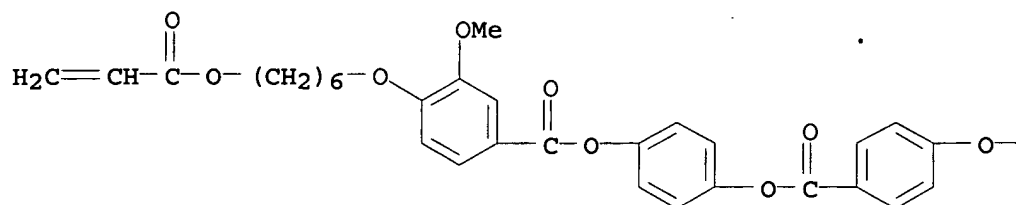


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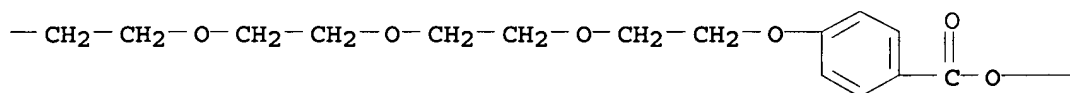
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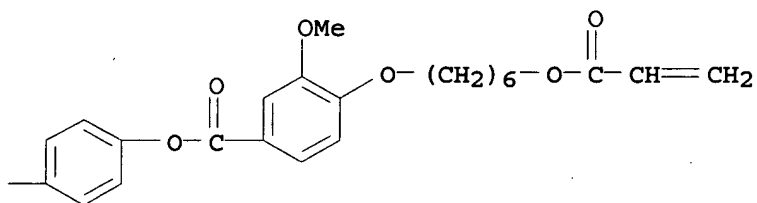
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PAGE 1-B



PAGE 1-C

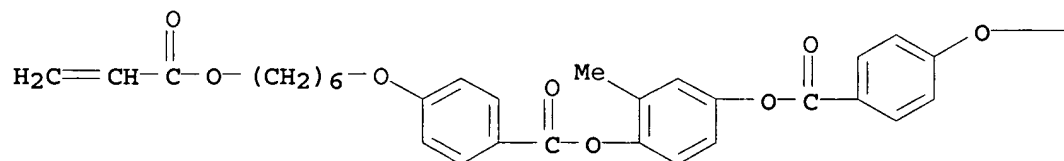


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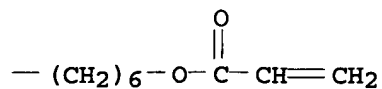
CRN 125248-71-7

CMF C39 H44 O10

PAGE 1-A



PAGE 1-B



RN 250230-61-6 HCAPLUS

CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediyl oxy-2,1-ethanediyl oxy)]bis-, bis[4-[[3-methoxy-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] ester, polymer with 1,4:3,6-dianhydro-D-glucitol bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate] (9CI) (CA INDEX NAME)

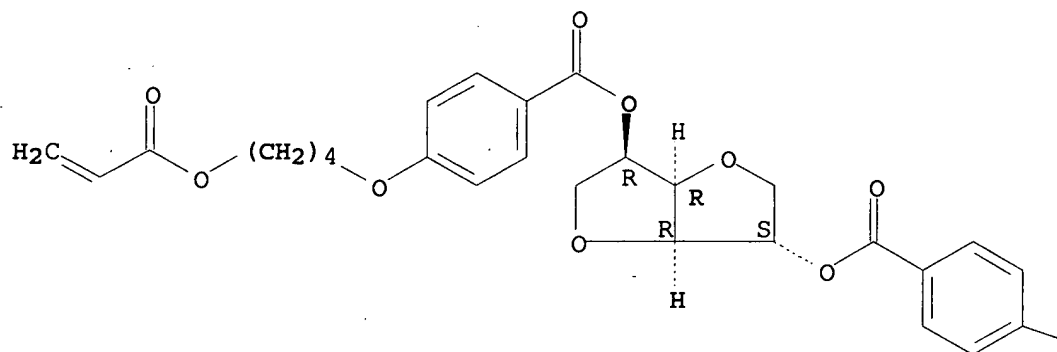
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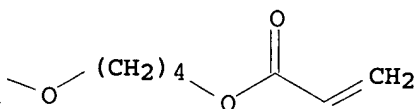
CMF C34 H38 O12

Absolute stereochemistry.

PAGE 1-A



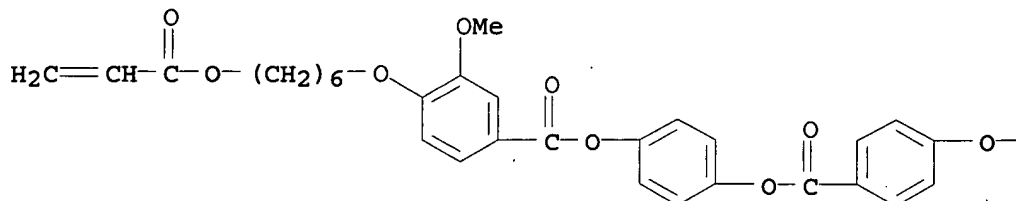
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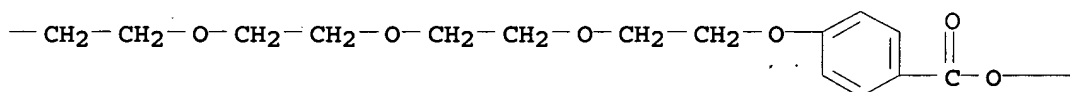
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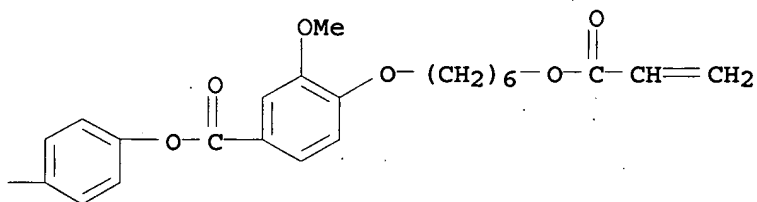
PAGE 1-A



PAGE 1-B



PAGE 1-C



CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

IT 250230-60-5P 250230-61-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(synthesis and phase transition of Me- and/or MeO-Ph ester-tetraethylene glycol nematic twin monomers and photopolymn. with sorbitol acrylate and rod mols. to obtain cholesteric polymer networks)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 46 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:994654 HCAPLUS

DOCUMENT NUMBER: 124:177196

TITLE: Mixtures of polymerizable liquid-crystalline compounds containing vinyl groups

INVENTOR(S): Siemensmeyer, Karl; Etzbach, Karl-Heinz;  
 Delavier, Paul; Meyer, Frank  
 PATENT ASSIGNEE(S): BASF A.-G., Germany  
 SOURCE: Ger. Offen., 93 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4408171	A1	19950914	DE 1994-4408171	199403 11
WO 9524454	A1	19950914	WO 1995-EP707	199502 27
W: BR, CA, CN, JP, KR, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 749466	A1	19961227	EP 1995-911272	199502 27
EP 749466	B1	19971112		
R: CH, DE, FR, GB, LI, NL				
CN 1143973	A	19970226	CN 1995-192043	199502 27
JP 11513360	T	19991116	JP 1995-523195	199502 27
US 5833880	A	19981110	US 1996-682587	199608 23
PRIORITY APPLN. INFO.:				
			DE 1994-4408171	A 199403 11
			WO 1995-EP707	W 199502 27

OTHER SOURCE(S): MARPAT 124:177196

AB The title mixts. contain  $\geq 2$  liquid-crystalline compds.  
 $Z1Y1A1Y1-p-C6H4CO2-p-C6H4O2C-p-C6H4Y2A2Y2Z2$  ( $Z1-2$  = polymerizable group such as acryloyloxy;  $Y1-2$  = a bond, O,  $CO_2$ ,  $O_2C$ , S;  $A1-2$  = spacing group such as alkylene or alkyleneoxyalkylene;  $\geq 1$  of the 3  $p-C6H4$  groups optionally contains 1-3 alkyl, halo, alkoxy, and/or other substituent). The mixts. are useful for the preparation of photocurable adhesives, liquid-crystalline polymers, etc. A liquid-crystalline mixture contained 1,4-bis[4-(6-acryloyloxyhexoxy)benzoyloxy]benzene and 1,4-bis[4-(6-acryloyloxyhexoxy)benzoyloxy]-2-chlorobenzene.

IT 172257-86-2 172257-97-5 172258-14-9  
 172258-20-7 172258-27-4 172339-37-6  
 172931-28-1  
 RL: NUU (Other use, unclassified); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (properties and uses of liquid-crystalline polymerizable)

RN 172257-86-2 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate], mixt. with 2-chloro-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 3-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 2-chloro-1,4-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-chloro-1,4-phenylene bis[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate] and 2-chloro-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

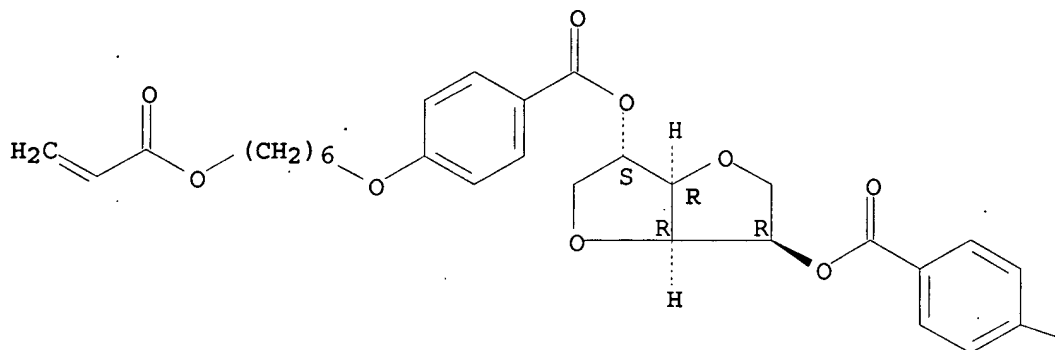
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CRN 172257-85-1

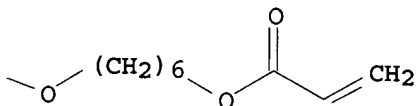
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Absolute stereochemistry.

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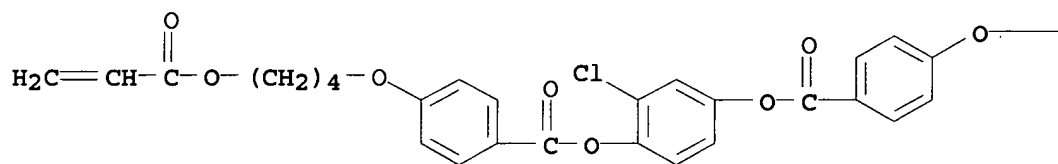


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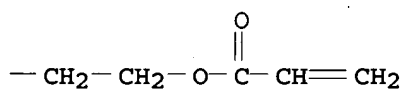
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PAGE 1-B



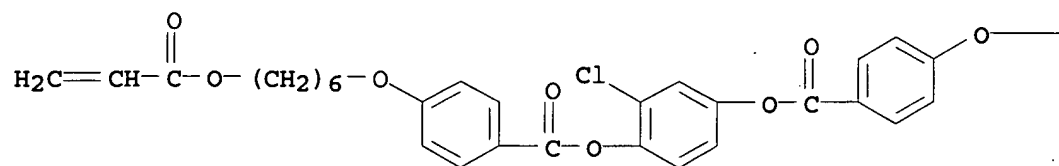
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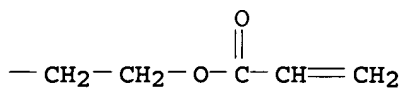
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PAGE 1-B

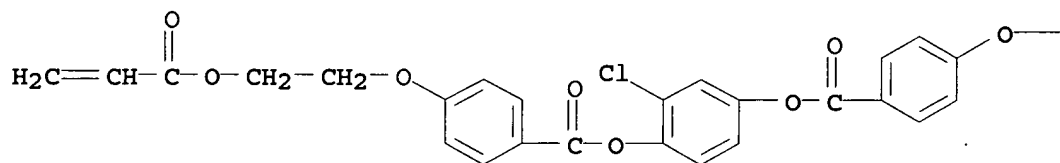


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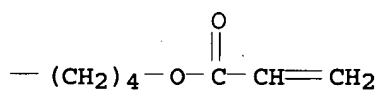
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CMF C32 H29 Cl O10

PAGE 1-A



PAGE 1-B

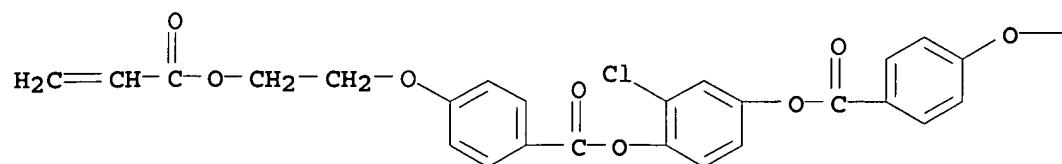


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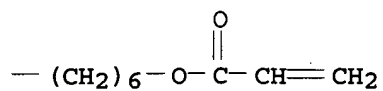
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PAGE 1-B

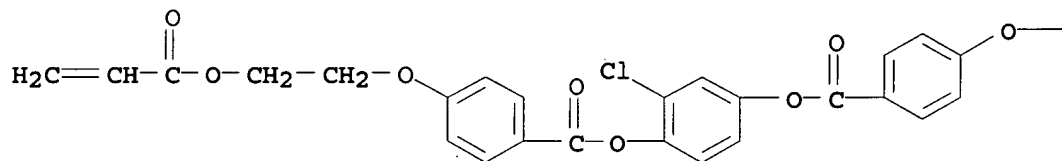


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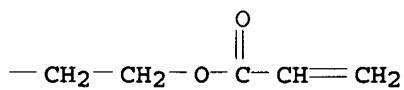
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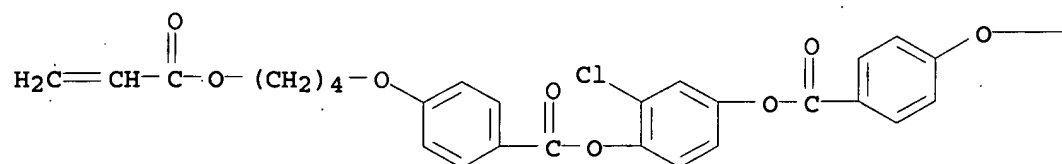


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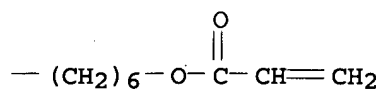
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PAGE 1-B

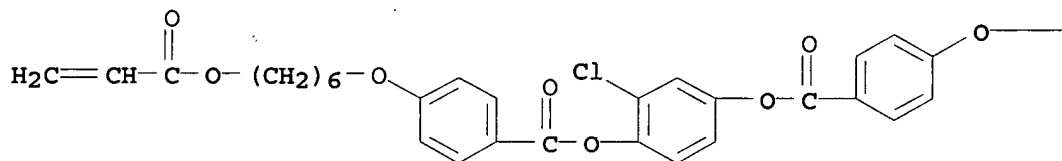


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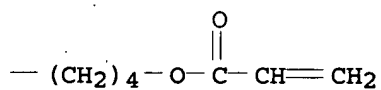
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PAGE 1-B

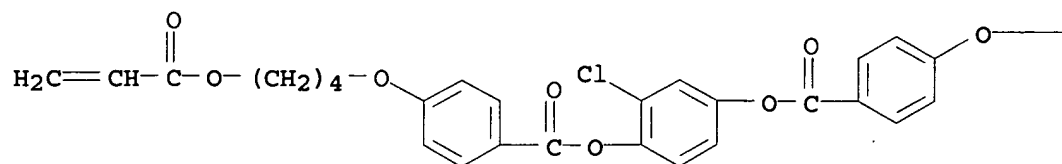


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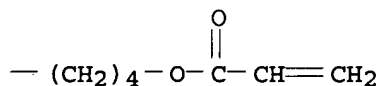
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CMF C34 H33 Cl O10

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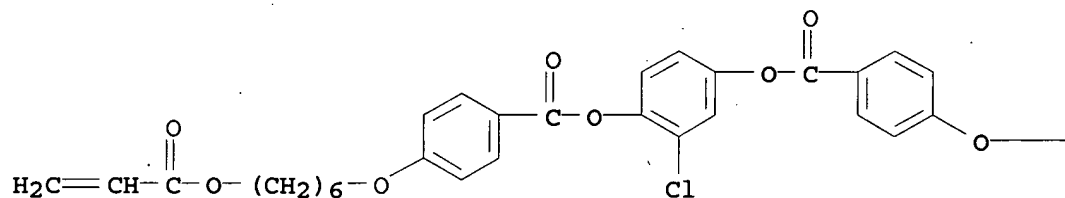


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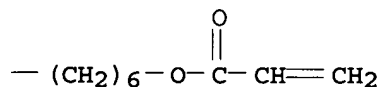
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PAGE 1-A



PAGE 1-B



RN 172257-97-5 HCAPLUS

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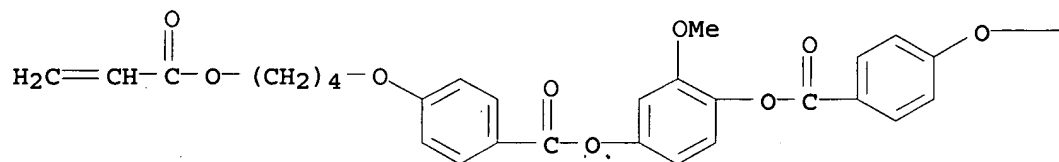
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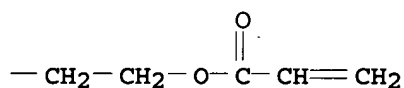
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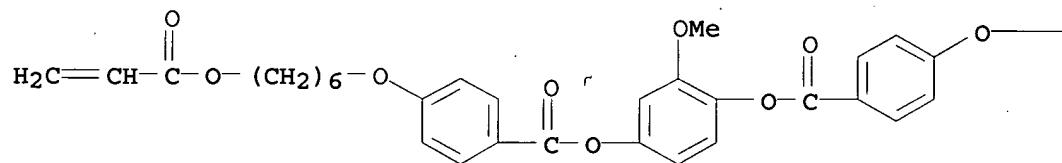


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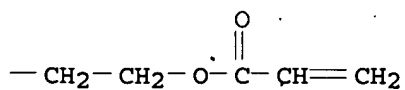
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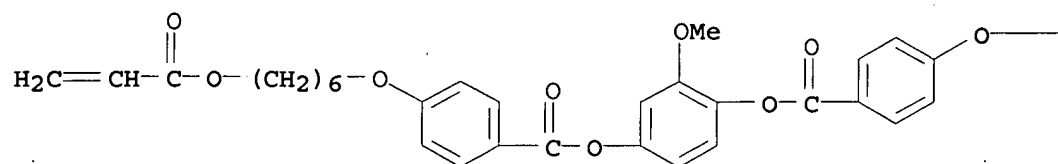


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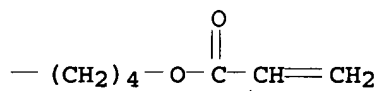
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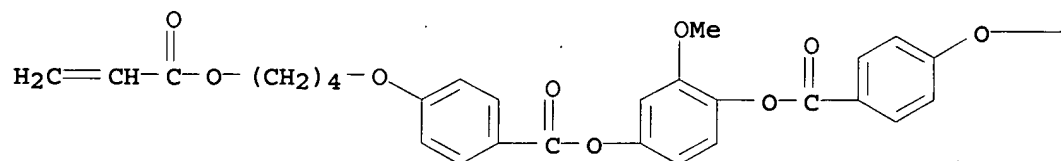


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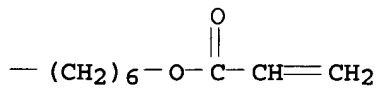
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PAGE 1-B

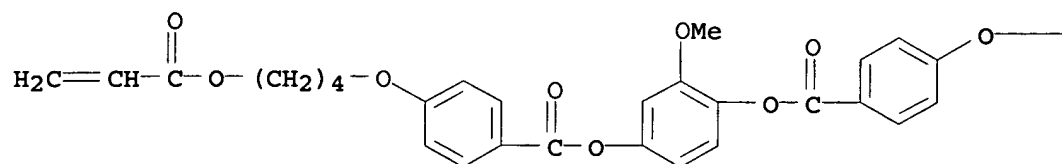


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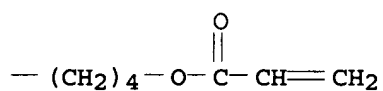
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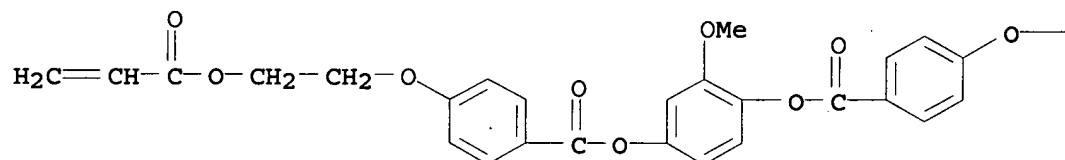


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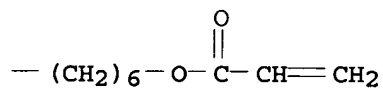
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CMF C35 H36 O11

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PAGE 1-B

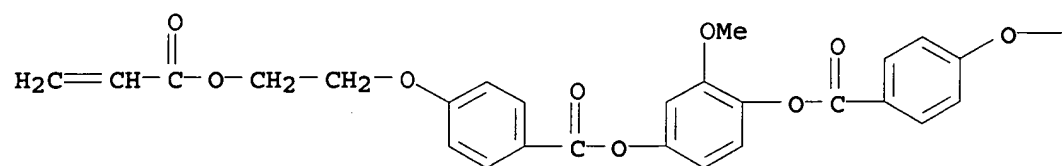


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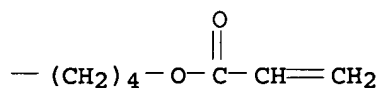
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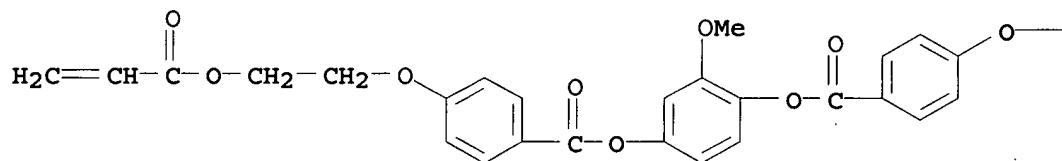


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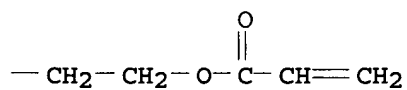
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CM 9

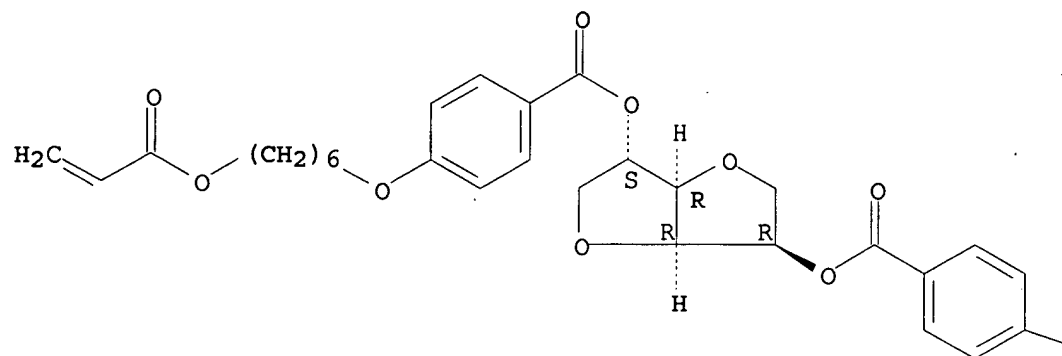
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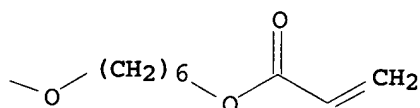
Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

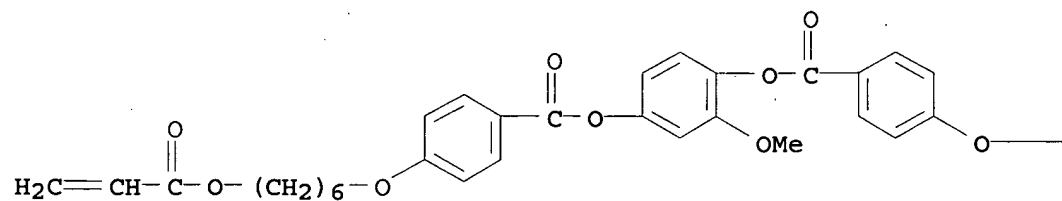


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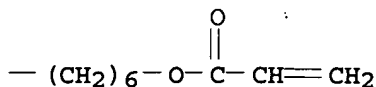
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RN 172258-14-9 HCAPLUS

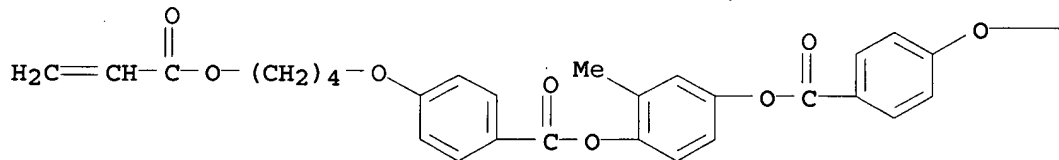
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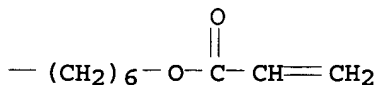
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PAGE 1-B

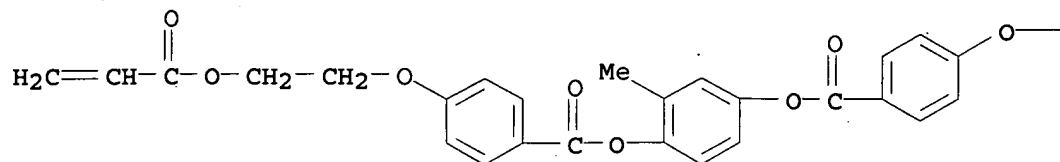


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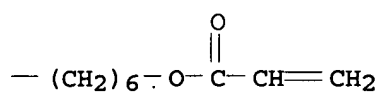
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PAGE 1-B

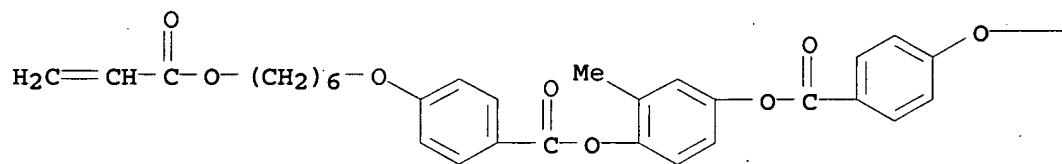


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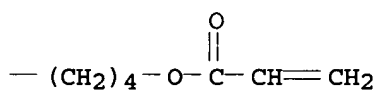
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CMF C37 H40 O10

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PAGE 1-B

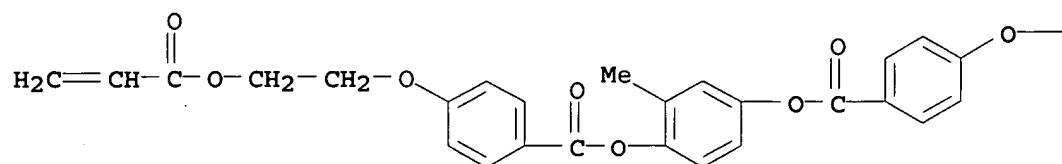


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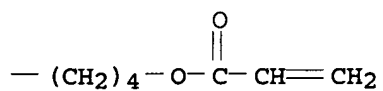
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PAGE 1-B

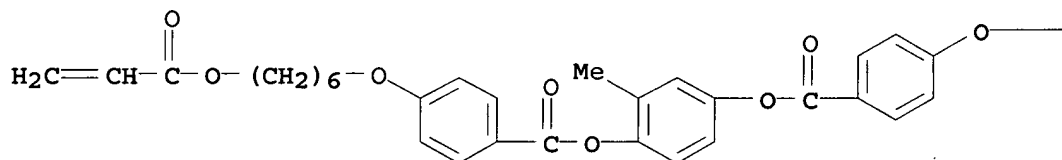


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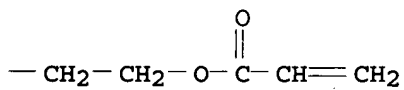
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PAGE 1-B

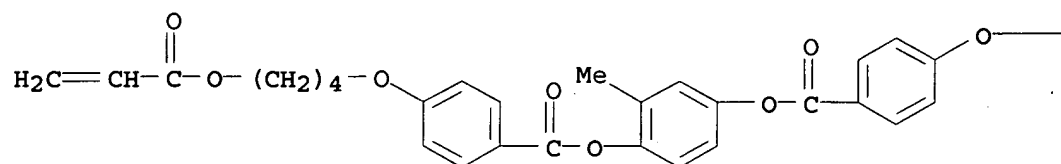


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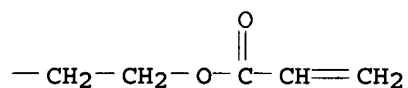
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CMF C33 H32 O10

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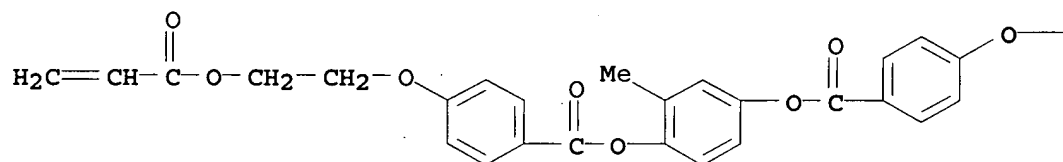


CM 7

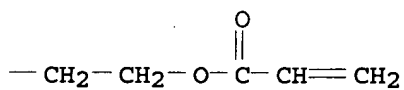
CRN 172258-06-9

CMF C31 H28 O10

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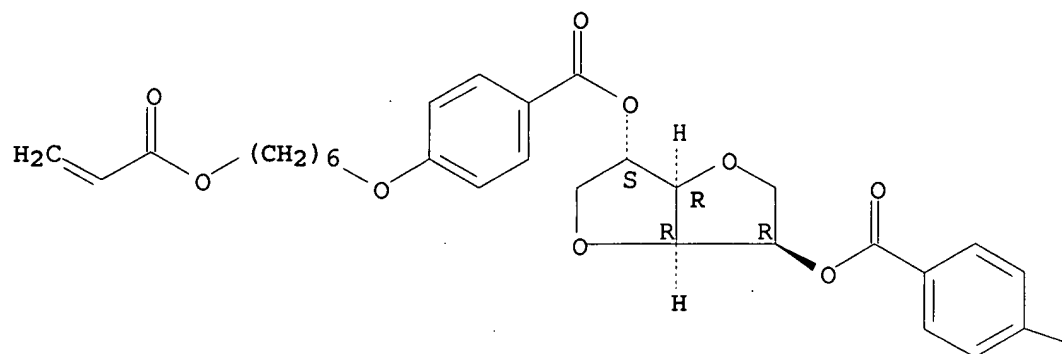
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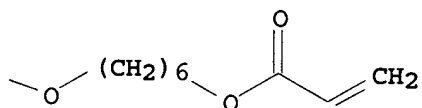
CMF C38 H46 O12

Absolute stereochemistry.

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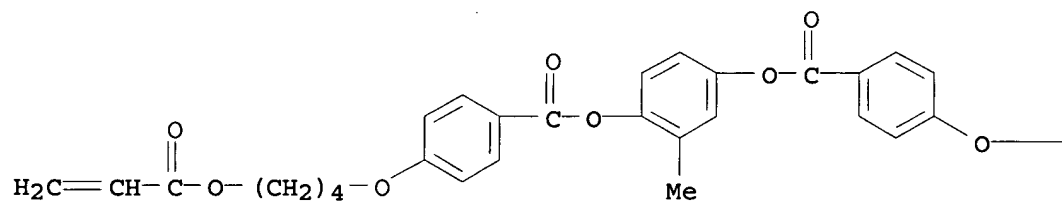


CM 9

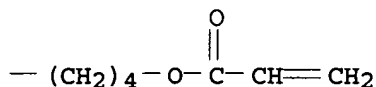
CRN 132900-75-5

CMF C35 H36 O10

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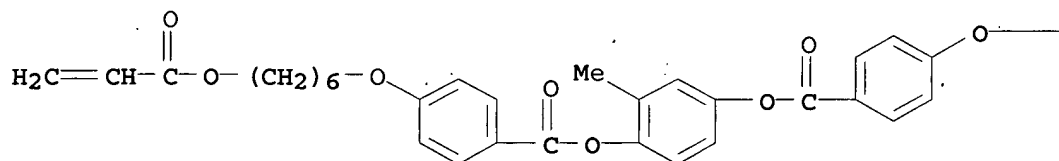


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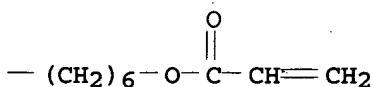
CRN 125248-71-7

CMF C39 H44 O10

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RN 172258-20-7 HCAPLUS

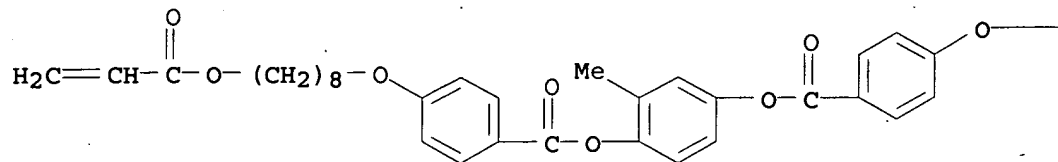
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate], mixt. with 2-methyl-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-methyl-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-methyl-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-methyl-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-methyl-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate, 3-methyl-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate, 2-methyl-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-methyl-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] and 2-methyl-1,4-phenylene bis[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoate] (9CI) (CA INDEX NAME)

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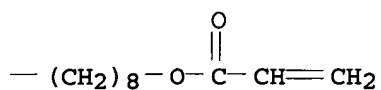
CRN 172258-18-3

CMF C43 H52 O10

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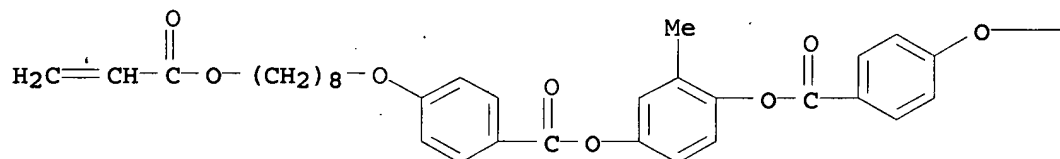


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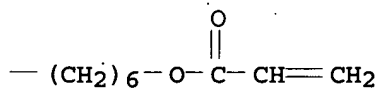
CRN 172258-17-2

CMF C41 H48 O10

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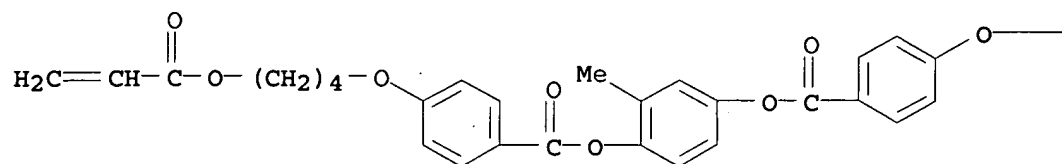
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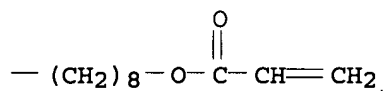
CMF C39 H44 O10



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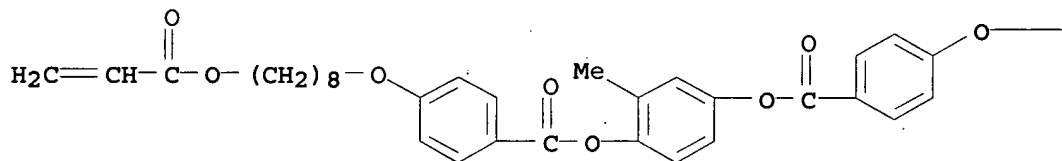


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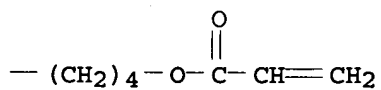
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CMF C39 H44 O10

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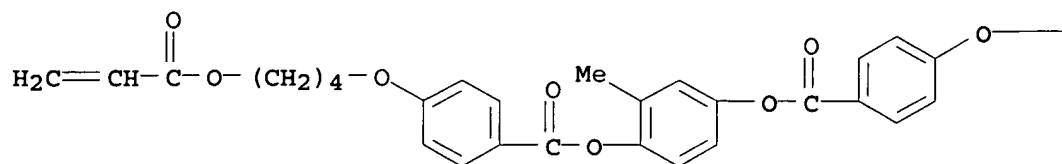


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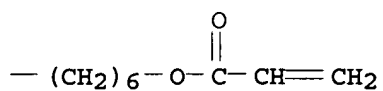
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CMF C37 H40 O10

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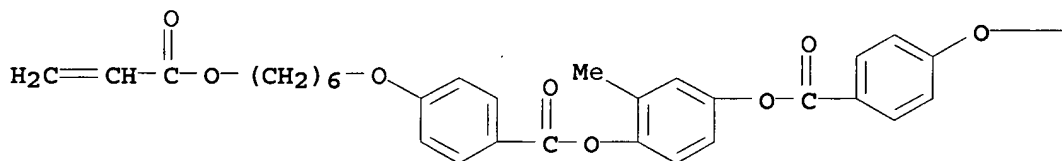


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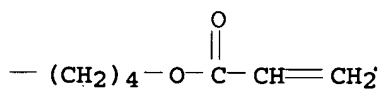
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CMF C37 H40 O10

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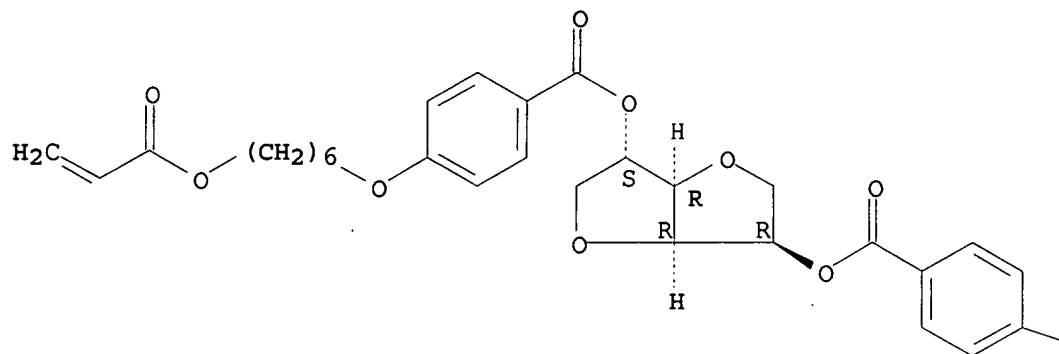
CM 7

CRN 172257-85-1

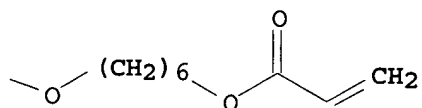
CMF C38 H46 O12

Absolute stereochemistry.

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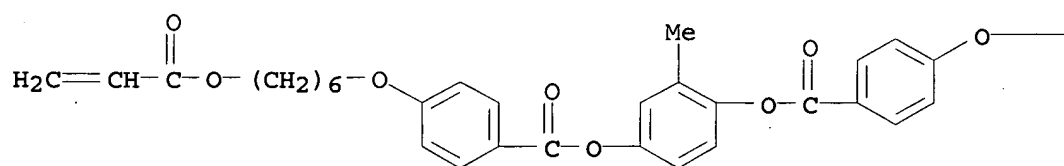


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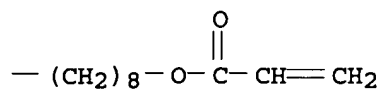
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CMF C41 H48 O10

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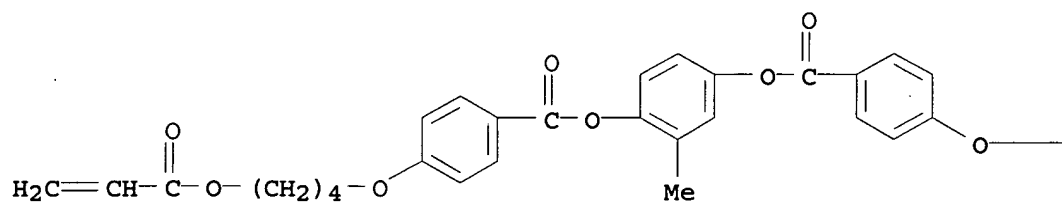


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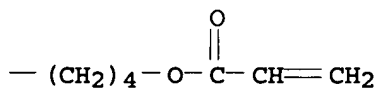
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CMF C35 H36 O10

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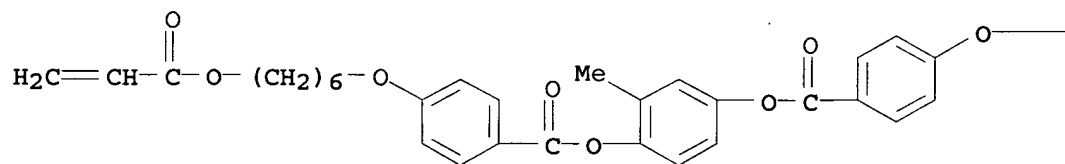


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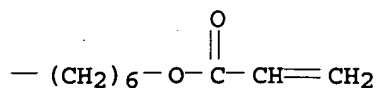
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CMF C39 H44 O10

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RN 172258-27-4 HCAPLUS

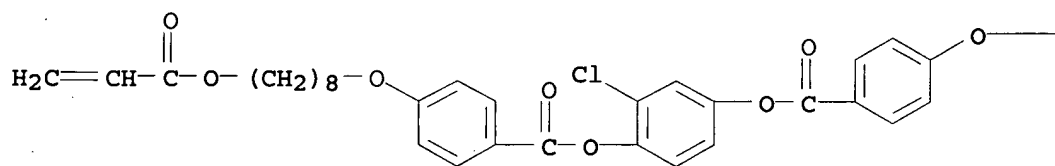
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate], mixt. with 2-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate, 3-chloro-4-[[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoyl]oxy]phenyl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate, 2-chloro-1,4-phenylene bis[4-[[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-chloro-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate and 2-chloro-1,4-phenylene bis[4-[[8-[(1-oxo-2-propenyl)oxy]octyl]oxy]benzoate] (9CI) (CA INDEX NAME)

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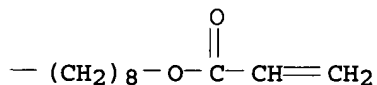
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CMF C42 H49 Cl O10

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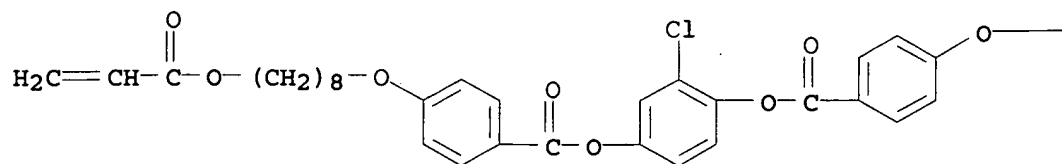


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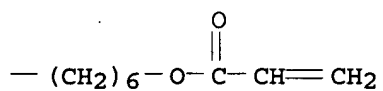
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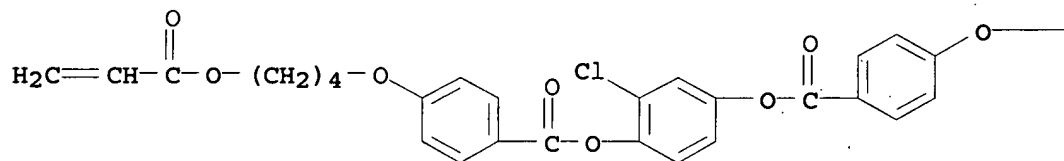


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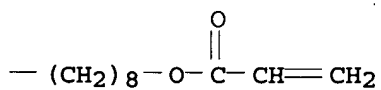
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CMF C38 H41 Cl O10

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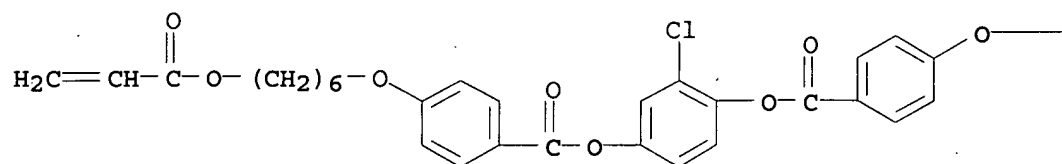


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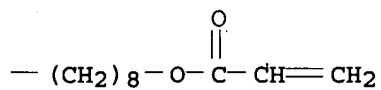
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CMF C40 H45 Cl O10

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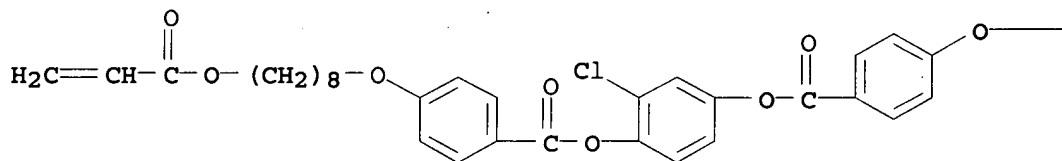


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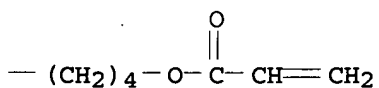
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CMF C38 H41 Cl O10

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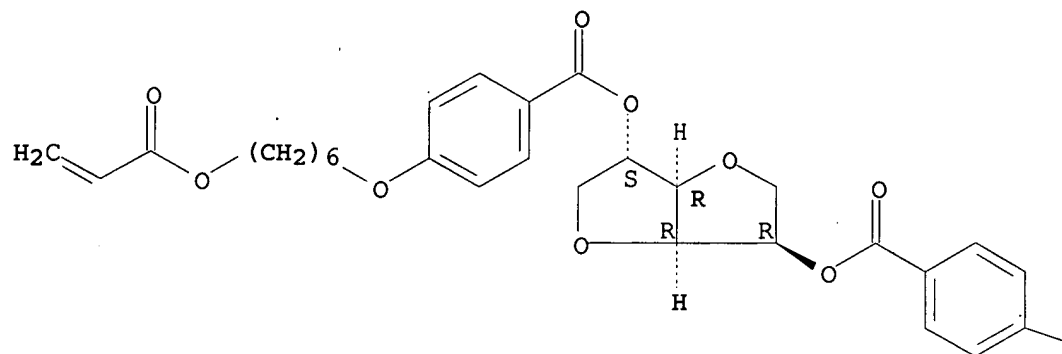
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CRN 172257-85-1

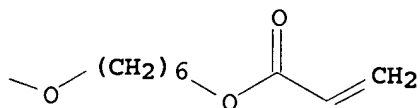
CMF C38 H46 O12

Absolute stereochemistry.

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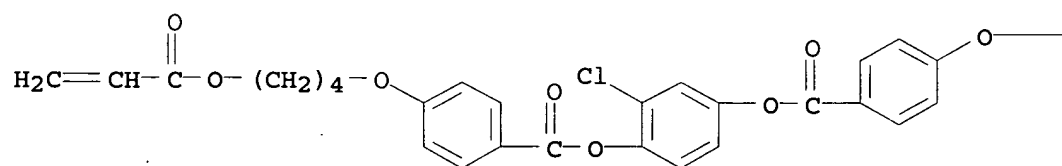


CM 7

CRN 172257-75-9

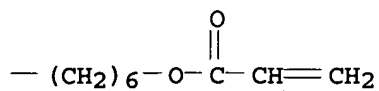
CMF C36 H37 Cl O10

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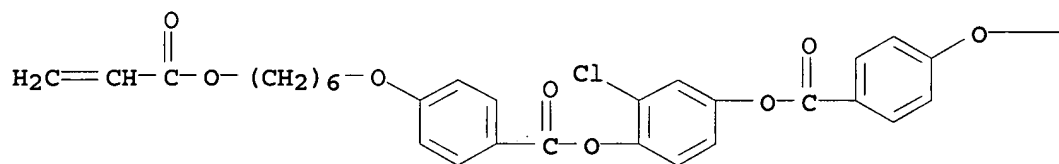


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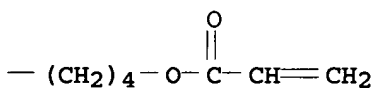
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CMF C36 H37 Cl O10

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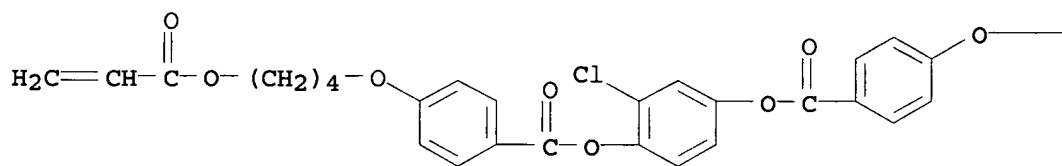


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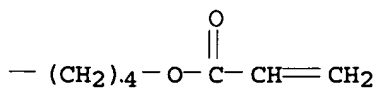
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CMF C34 H33 Cl O10

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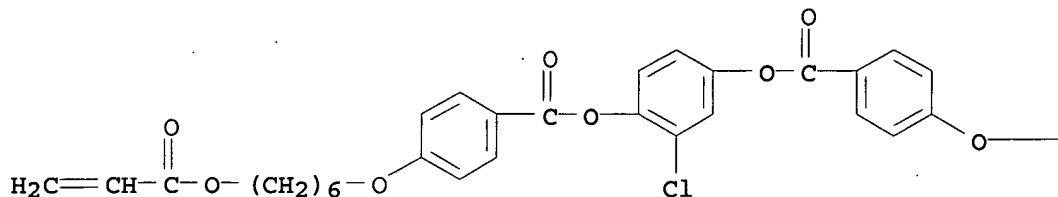


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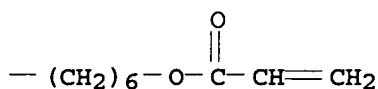
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CMF C38 H41 Cl O10

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RN 172339-37-6 HCAPLUS

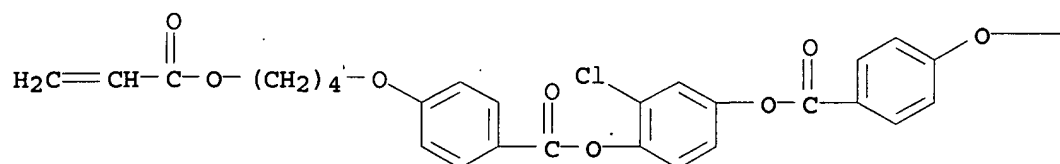
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate], mixt. with 2-chloro-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 3-chloro-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 2-chloro-1,3-phenylene bis[4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate], 2-chloro-1,4-phenylene bis[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate] and 2-chloro-1,4-phenylene bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

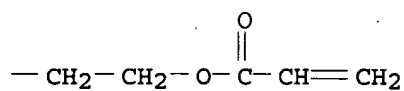
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CMF C32 H29 Cl O10

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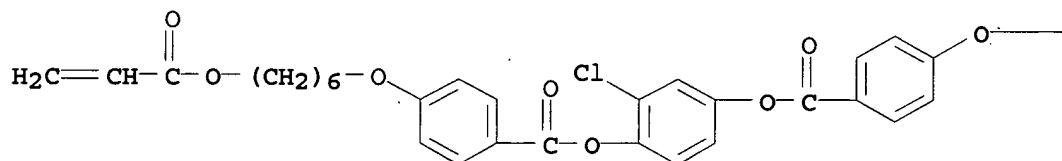


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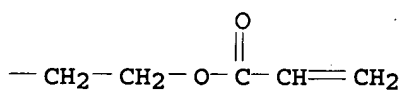
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CMF C34 H33 Cl O10

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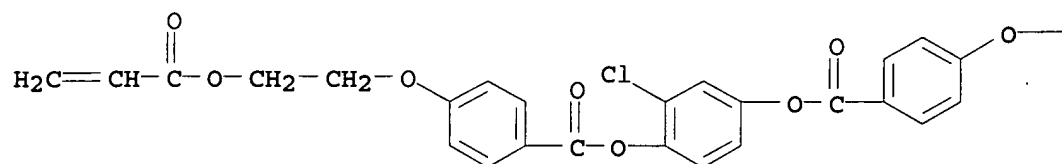


CM 3

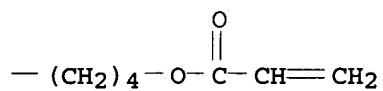
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CMF C32 H29 Cl O10

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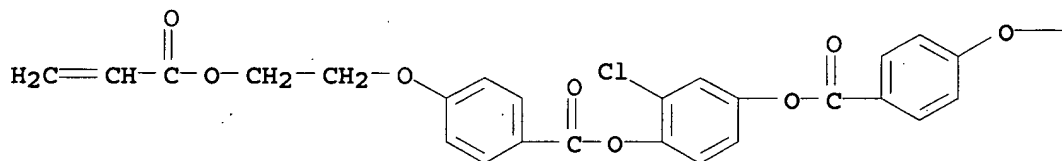


CM 4

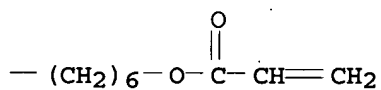
CRN 172257-79-3

CMF C34 H33 Cl O10

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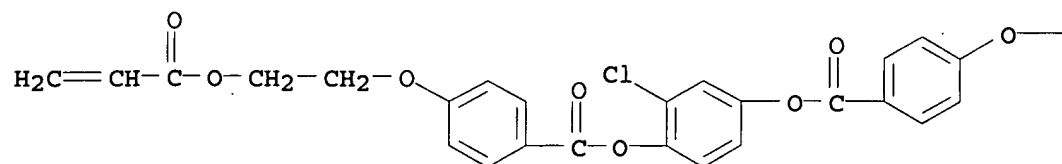


CM 5

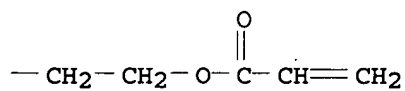
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CMF C30 H25 Cl O10

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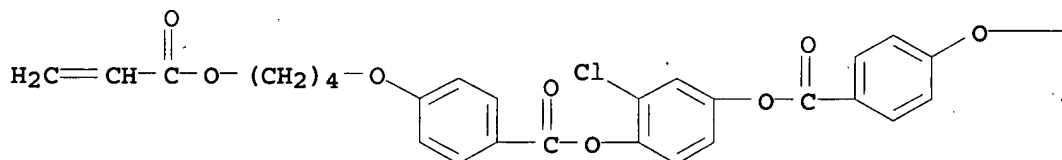


CM 6

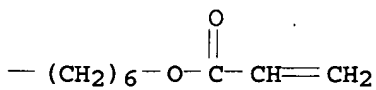
CRN 172257-75-9

CMF C36 H37 Cl O10

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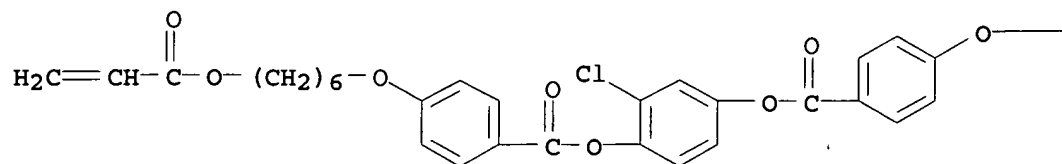


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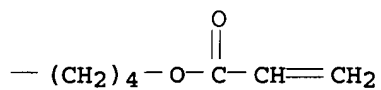
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CMF C36 H37 Cl O10

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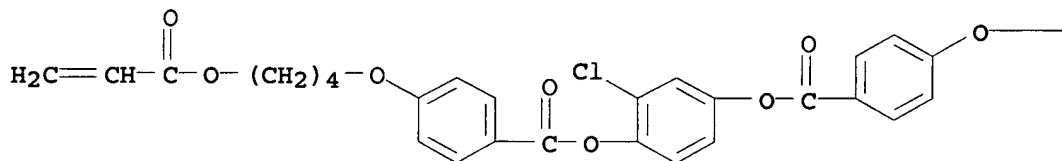


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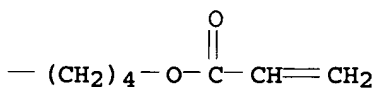
CRN 172257-73-7

CMF C34 H33 Cl O10

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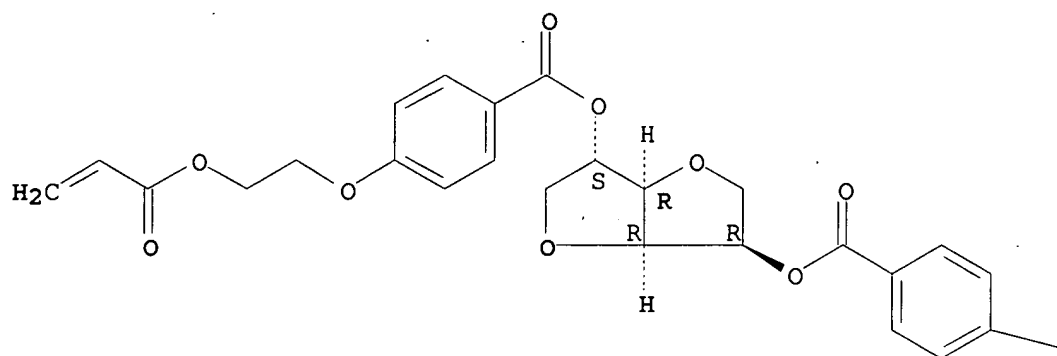
CM 9

CRN 165186-76-5

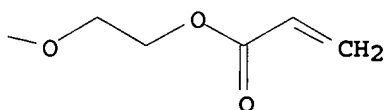
CMF C30 H30 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

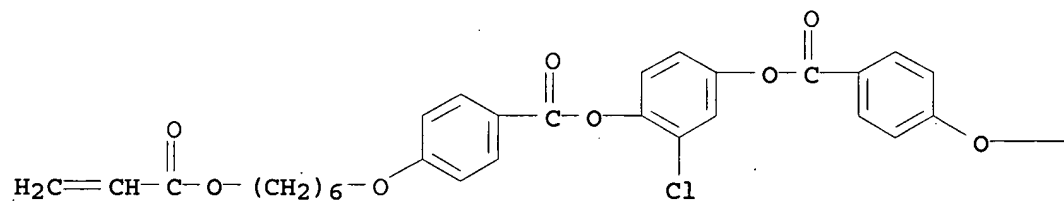


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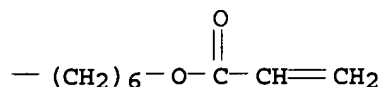
CRN 150809-90-8

CMF C38 H41 Cl O10

PAGE 1-A



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RN 172931-28-1 HCAPLUS

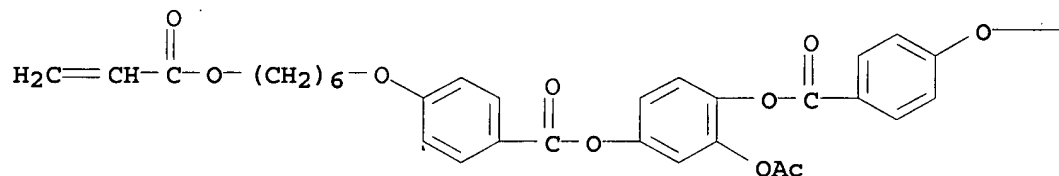
CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate], mixt. with 2-(acetyloxy)-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-(acetyloxy)-4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-(acetyloxy)-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 3-(acetyloxy)-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]benzoate, 2-(acetyloxy)-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 3-(acetyloxy)-4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate and 2-(acetyloxy)-1,4-phenylene bis[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate] (9CI)  
(CA INDEX NAME)

CM 1

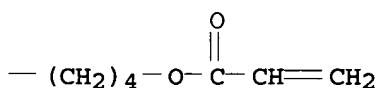
CRN 172258-05-8

CMF C38 H40 O12

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PAGE 1-B



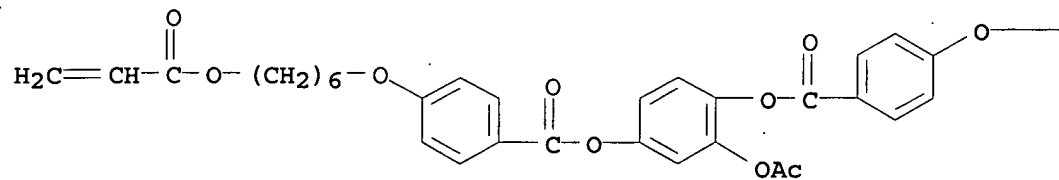
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CRN 172258-04-7

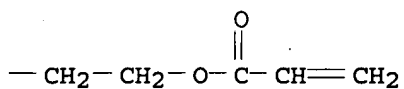
CMF C36 H36 O12



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PAGE 1-B

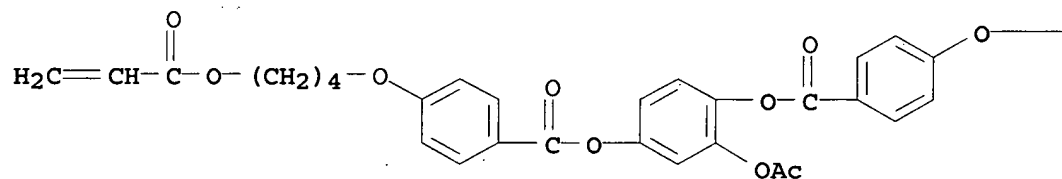


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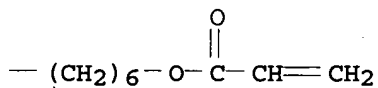
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CMF C38 H40 O12

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CM 4

CRN 172258-02-5

CMF C34 H32 O12

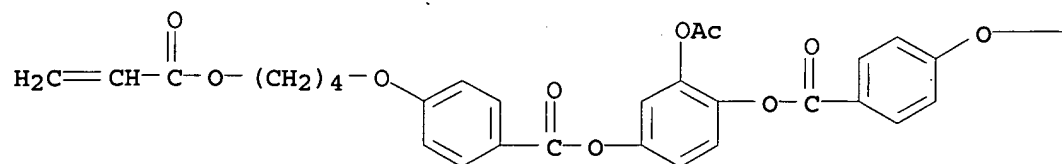
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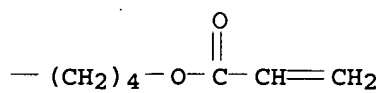
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CMF C36 H36 O12

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PAGE 1-B

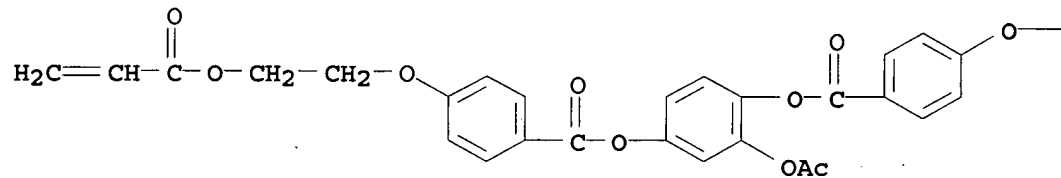


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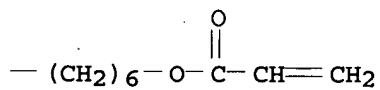
CRN 172258-00-3

CMF C36 H36 O12

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PAGE 1-B

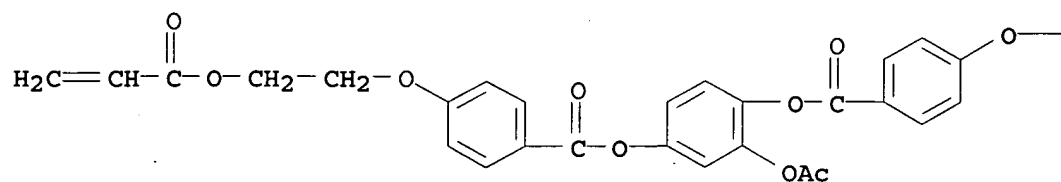


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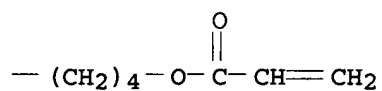
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CMF C34 H32 O12

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PAGE 1-B

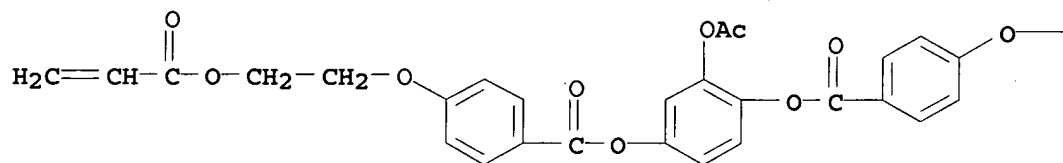


CM 8

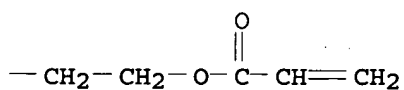
CRN 172257-98-6

CMF C32 H28 O12

PAGE 1-A



PAGE 1-B



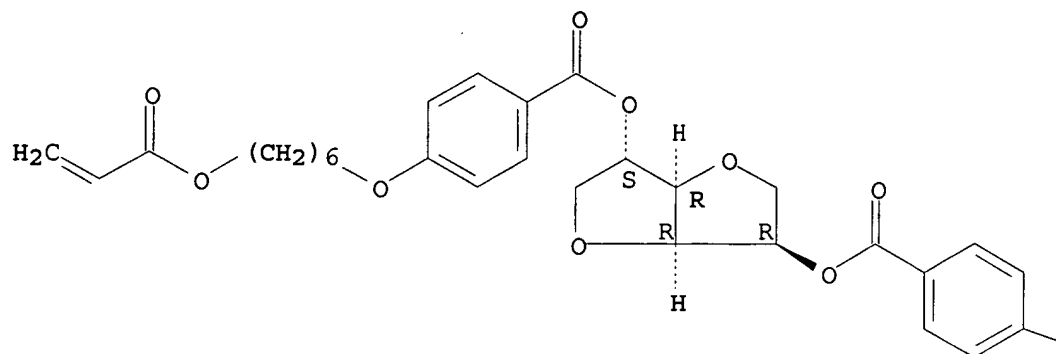
CM 9

CRN 172257-85-1

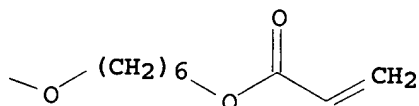
CMF C38 H46 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IC ICM C07C069-92  
 ICS C07C069-54; C09K019-20; C09K019-38; C09K019-56; C08F220-30;  
 C09J157-10; G02F001-13; G02F001-1337; G09F009-35  
 ICA C08F212-14; C08F214-14; C08F216-14; C08F218-12; C08F228-02;  
 C09J133-14; C09J131-02; C09J129-10; C09J141-00; C09J127-04  
 CC 35-2 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 25, 41, 75  
 IT 172257-71-5 172257-72-6 172257-76-0 172257-83-9  
 172257-86-2 172257-87-3 172257-96-4 172257-97-5  
 172258-13-8 172258-14-9 172258-19-4 172258-20-7  
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 172339-39-8 172339-40-1 172339-41-2 172487-01-3 172931-27-0  
 172931-28-1  
 RL: NUU (Other use, unclassified); PRP (Properties); TEM (Technical  
 or engineered material use); USES (Uses)  
 (properties and uses of liquid-crystalline polymerizable)

=&gt;

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L15 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:272257 HCAPLUS

DOCUMENT NUMBER: 144:340871

TITLE: Manufacture of optical film, and polarizing plate, liquid crystal panel, and liquid crystal display

INVENTOR(S): Koishi, Naoki; Yano, Shuji; Motomura, Hironori

PATENT ASSIGNEE(S): Nitto Denko Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

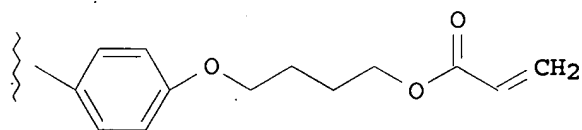
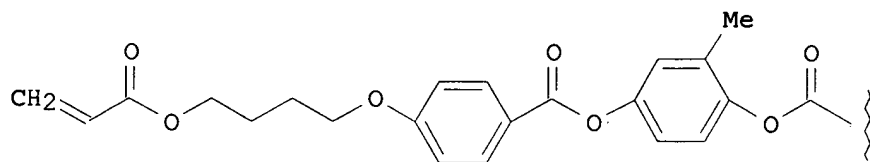
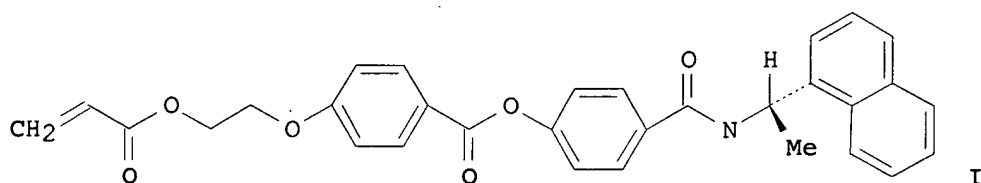
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006078617	A	20060323	JP 2004-260529	20040908
PRIORITY APPLN. INFO.:			JP 2004-260529	20040908

GI



II

AB Disclosed is a process comprising the steps of (1) applying on a substrate a composition containing a polymerizable nematic liquid crystal, a polymerizable chiral agent, a polymerization initiator, and a solvent and (2) irradiating with UV light 100-1500 mJ/cm<sup>2</sup>, in which a content of said polymerizable chiral agent is 15-18 (weight ratio) on the basis of

100 of the total solid fraction of said composition Said polymerizable chiral agent is presented by I. Said polymerizable nematic liquid crystal is represented by II.

IT 880080-27-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(manufacture of LCD polarizer and optical film from polymerizable chiral agent and polymerizable nematic liquid crystal)

RN 880080-27-3 HCAPLUS

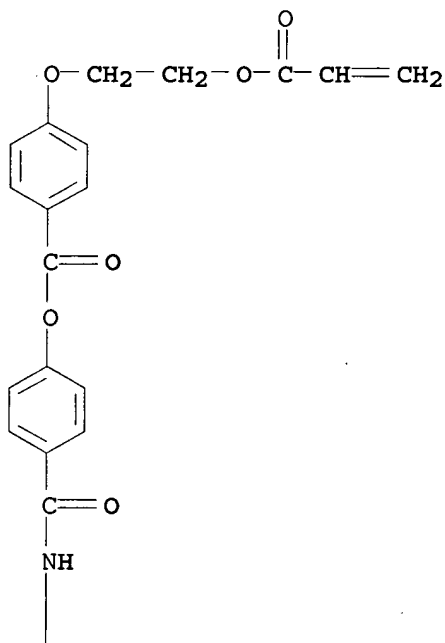
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 1,4-phenylene ester, polymer with 4-[[[1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

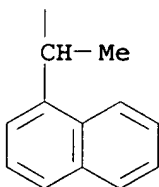
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CMF C31 H27 N O6

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PAGE 2-A

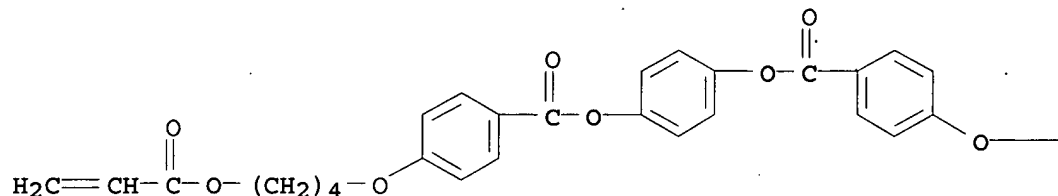


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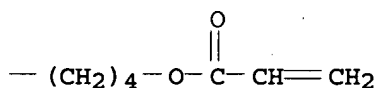
CRN 132694-65-6

CMF C34 H34 O10

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PAGE 1-B



CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 73, 75

IT 880080-27-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(manufacture of LCD polarizer and optical film from polymerizable chiral agent and polymerizable nematic liquid crystal)

L15 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:120123 HCAPLUS

DOCUMENT NUMBER: 144:202277

TITLE: Liquid crystal displays/panels, polarizers thereof, retarders from photopolymerizable liquid crystal compositions, and manufacture thereof

INVENTOR(S): Koishi, Naoki; Takahashi, Naoki

PATENT ASSIGNEE(S): Nitto Denko Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006039164	A	20060209	JP 2004-218213	20040727

PRIORITY APPLN. INFO.: JP 2004-218213

200407

27

AB To make retarders having  $\geq 2$ -layer phase separation textures including cholesteric mesophase layers and isotropic layers, compns. of nematic liquid crystalline monomers, chiral monomers, polymerization initiators, and solvents (preferably ketones) are applied on substrates (e.g., PET film) and exposed to actinic rays at  $T_i \pm 2.0^\circ$  ( $T_i$  = mesophase-isotropic transition temperature of the compns.) to form the cholesteric layers which do not repel the substrates and hold uniform retardation over all the area of the retarders. The retarders may satisfy 590-nm transmittance  $\geq 80\%$ . Polarizers having the retarders on one side and liquid crystal panels equipped with the same are further claimed.

IT 874654-69-0P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(mesophase layers; photopolymerizable nematic liquid crystal compns. forming cholesteric mesophase layers with good adhesion to retarder substrates for LCD)

RN 874654-69-0 HCAPLUS

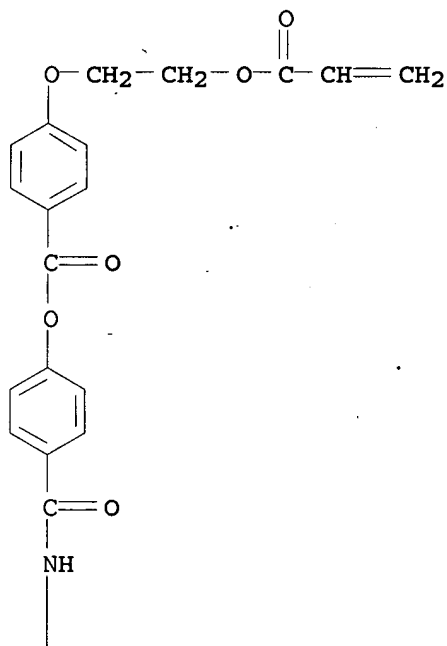
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 270563-55-8

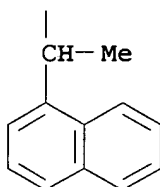
CMF C31 H27 N O6

PAGE 1-A





PAGE 2-A

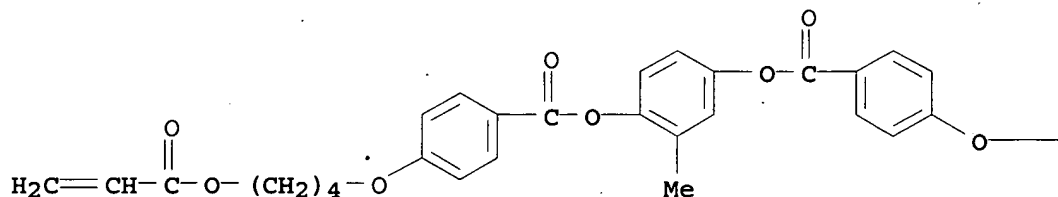


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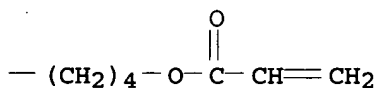
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73, 75

IT 874654-69-0P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(mesophase layers; photopolymerizable nematic liquid crystal comps. forming cholesteric mesophase layers with good adhesion to retarder substrates for LCD)

L15 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:160243 HCAPLUS

DOCUMENT NUMBER: 142:229148

TITLE: Compensator-laminated polarizers with liners with excellent curling resistance and thermal stability and their manufacture

INVENTOR(S): Wasai, Kanako; Yano, Shuji; Yamaoka, Hisashi; Adachi, Junichi; Kawai, Masayuki

PATENT ASSIGNEE(S): Nitto Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005049597	A	20050224	JP 2003-281268	20030728
JP 3840209	B2	20061101	JP 2003-281268	20030728

PRIORITY APPLN. INFO.: JP 2003-281268

AB The method contains laminating release liners (made of PET, preferably) to laminated polarizers, including optical compensation layers (containing cholesteric liquid crystal polymers, preferably), via adhesive layers under applying certain tension in the longitudinal or width direction to the liners, thus giving the polarizers satisfying that  $(X - Y) = -0.1$  to  $0$ ,  $[X \text{ (shrinkage of liner, \%)} = (X_a - X_b)/X_b + 100$ ;  $Y \text{ (shrinkage of polarizer, \%)} = (Y_a - Y_b)/Y_b + 100$ ;  $X_a, X_b = \text{length of liner, after and before peeling, resp.}; Y_a, Y_b = \text{length of polarizer, after and before peeling, resp.}]$ .

IT 569343-70-0P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (compensation layer; manufacture of compensator-laminated polarizers with good curling resistance and thermal stability by laminating liners under tension)

RN 569343-70-0 HCAPLUS

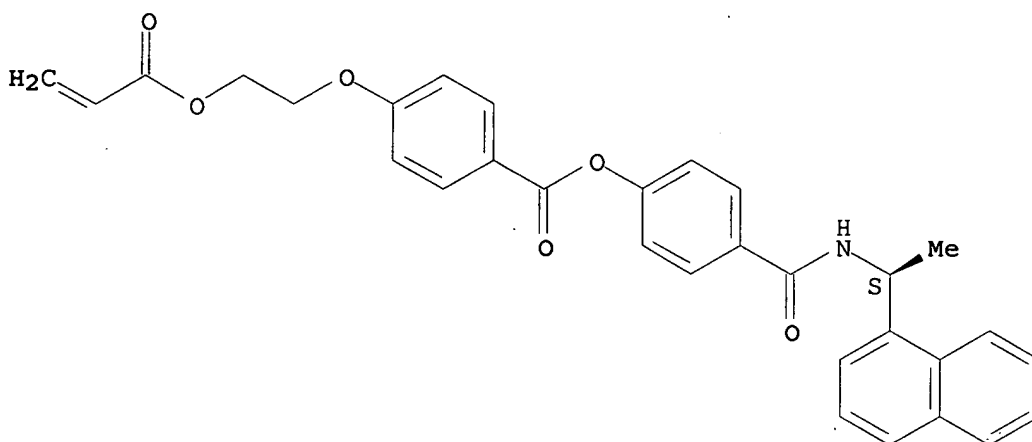
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[(1S)-1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 331955-06-7

CMF C31 H27 N O6

Absolute stereochemistry.

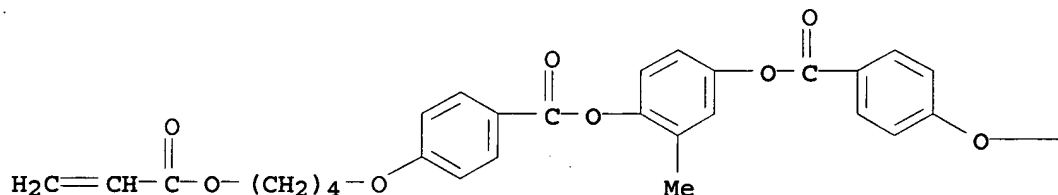


CM 2

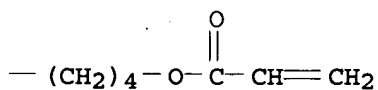
CRN 132900-75-5

CMF C35 H36 O10

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IC ICM G02B005-30

ICS G02F001-1335; G02F001-1336

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 73

IT 569343-70-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (compensation layer; manufacture of compensator-laminated polarizers with good curling resistance and thermal stability by laminating liners under tension)

L15 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

MEI HUANG EIC1700 REM4B28 571-272-3952

22/12/2006

ACCESSION NUMBER: 2004:781847 HCAPLUS  
 DOCUMENT NUMBER: 141:268740  
 TITLE: Manufacture of large coated sheets with uniform coating thickness and optical layers, compensators, polarizers, optical elements, and display devices using them  
 INVENTOR(S): Kondo, Seiji; Tsuchimoto, Kazuyoshi; Masuda, Tomoaki; Komatsubara, Makoto; Ota, Mie; Inoue, Ryuichi  
 PATENT ASSIGNEE(S): Nitto Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004261791	A	20040924	JP 2003-195002	20030710
JP 3839798	B2	20061101		
WO 2005005061	A1	20050120	WO 2004-JP3744	20040319
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1795054	A	20060628	CN 2004-80014398	20040319
US 2006158076	A1	20060720	US 2006-563865	20060109
PRIORITY APPLN. INFO.:			JP 2002-306528	A 20021022
			JP 2003-195002	A 20030710
			WO 2004-JP3744	W 20040319

AB The sheets, useful for LCD, OEL, PDP, and CRT, are manufactured by applying coatings (solids content ≤55%) containing resins and solvents to substrate films, blowing dry air in the running

direction to the coating surfaces with viscosity  $\leq 20$  mPa-s, and drying them, thus forming minute uneven patterns on the surfaces and improving leveling properties on drying. The coatings may contain cholesteric non-LC (liquid crystal) polymers, obtained by polymerizing or crosslinking LC monomers, or cholesteric LC polymers.

IT 755036-94-3P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(compensator; coating process including dry air blowing process for leveling coating layers for polarizers for displays)

RN 755036-94-3 HCAPLUS

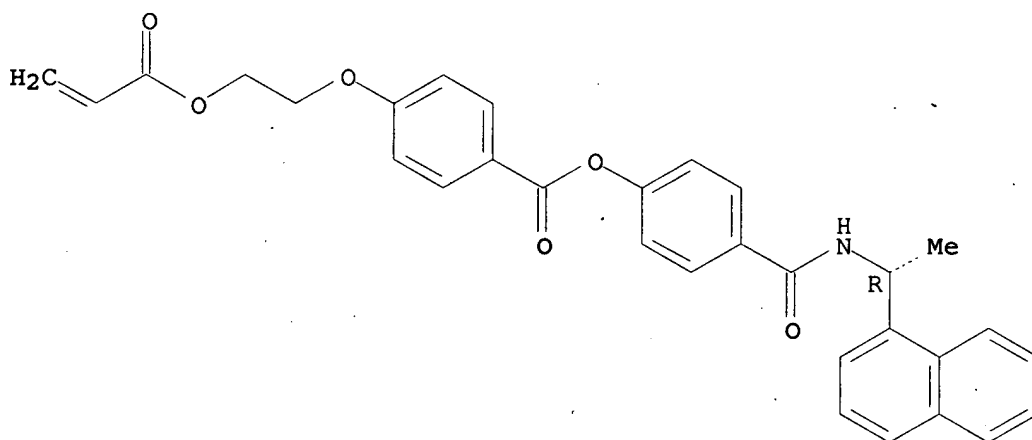
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[(1R)-1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 192045-64-0

CMF C31 H27 N O6

Absolute stereochemistry.

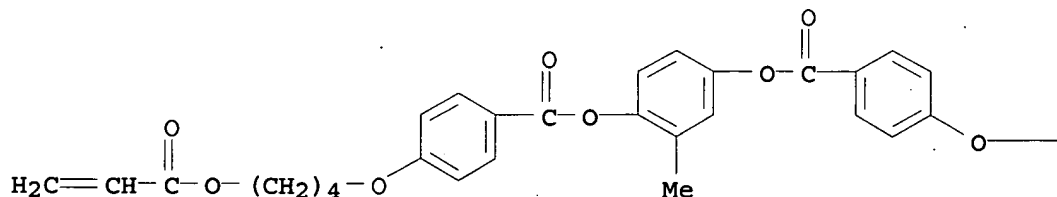


CM 2

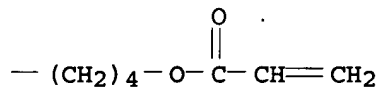
CRN 132900-75-5

CMF C35 H36 O10

PAGE 1-A



PAGE 1-B



IC ICM B05D003-02  
 ICS B05D007-04; G02B005-30; G02F001-1336  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 42, 73  
 IT 755036-94-3P  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (compensator; coating process including dry air blowing process for leveling coating layers for polarizers for displays)

L15 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:430062 HCAPLUS  
 DOCUMENT NUMBER: 140:431520  
 TITLE: Liquid crystal optical compensating layer-forming material for manufacturing polarizer plate therewith on optical film in optical imaging devices  
 INVENTOR(S): Adachi, Junichi; Saiki, Yuji; Yoshioka, Masahiro; Ogasawara, Akiko  
 PATENT ASSIGNEE(S): Nitto-Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004151690	A	20040527	JP 2003-335299	20030926
PRIORITY APPLN. INFO.:			JP 2002-298542	A 20021011

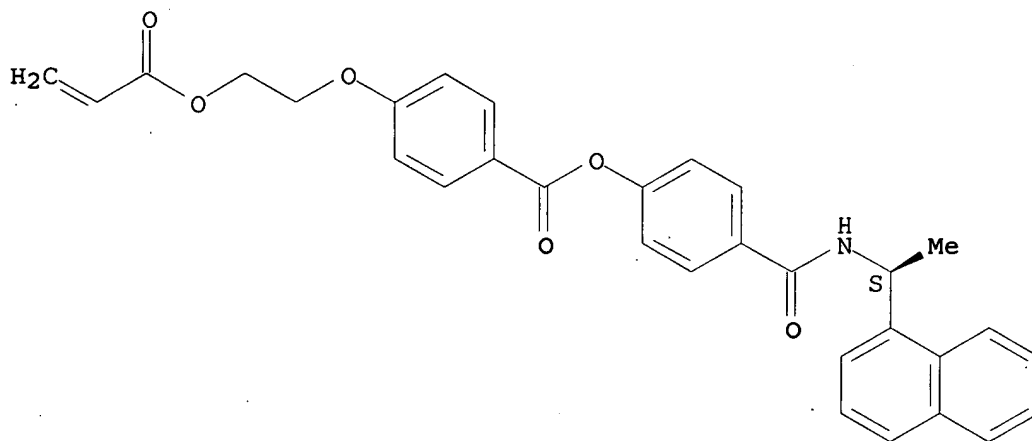
AB The title material contains a polymerizable liquid crystal and a polymerizable compound having soft segment. The material provides the optical compensating layer which generates little crack thereon.  
 IT 692754-79-3P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (optical compensation layer-forming material for manufacturing polarizer plate therewith on optical film in optical imaging devices)

RN 692754-79-3 HCAPLUS  
 CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[(1S)-1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate and  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 331955-06-7  
 CMF C31 H27 N O6

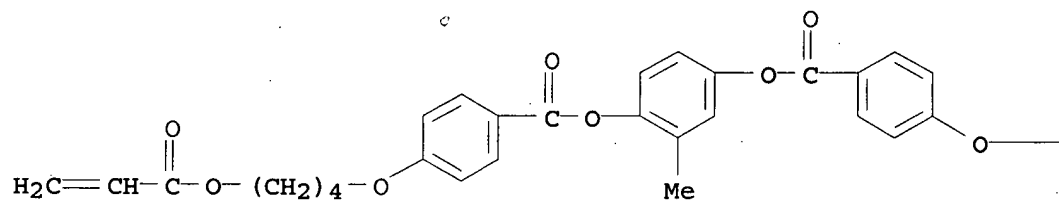
Absolute stereochemistry.



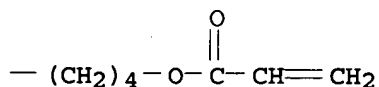
CM 2

CRN 132900-75-5  
 CMF C35 H36 O10

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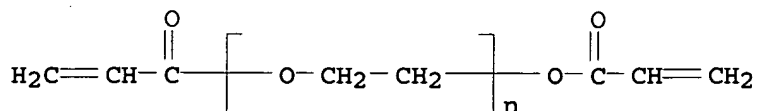


CM 3

CRN 26570-48-9

CMF (C2 H4 O)n C6 H6 O3

CCI PMS



IC ICM G02B005-30

ICS G02F001-1335; G02F001-1336

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 692754-79-3P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(optical compensation layer-forming material for manufacturing polarizer plate therewith on optical film in optical imaging devices)

L15 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:354415 HCAPLUS

DOCUMENT NUMBER: 140:347716

TITLE: Optical polarizing plate associated with optical compensation layer, optical film, and electrooptical imaging device

INVENTOR(S): Ogasawara, Akiko; Yoshioka, Masahiro; Saiki, Yuji

PATENT ASSIGNEE(S): Nitto Denko Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004133002	A	20040430	JP 2002-294398	20021008
PRIORITY APPLN. INFO.:				20021008
				20021008

AB The plate is made of an optical compensation layer, in which polymerizable liquid crystal materials are oriented and fixed by polymerization, and an optical polarizing plate. The layer and the plate are laminated through a pressure-sensitive adhesive layer whereas a separator is temporarily fixed on the compensation layer through a pressure-sensitive adhesive layer on the opposite side to the polarizing plate. The optical film is that involving ≥1 of the above polarizing plate. The electrooptical imaging device, e.g.,



liquid crystal display device is that using the polarizing plate or the optical film. The display device provides uniform images because the optical compensation layer is prevented from damaging, e.g., cracking, in application onto a liquid crystal panel, etc.

IT 569343-70-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(oriented; optical polarizing plate associated with mech. supported optical compensation layer containing)

RN 569343-70-0 HCAPLUS

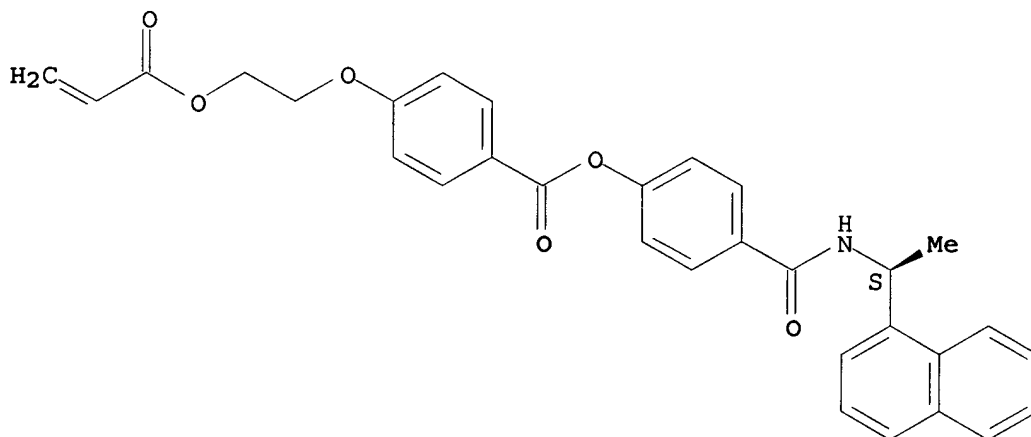
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[(1S)-1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 331955-06-7

CMF C31 H27 N O6

Absolute stereochemistry.

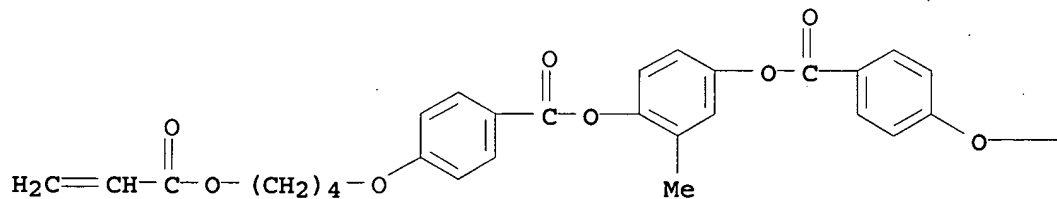


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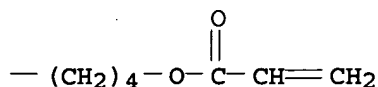
CRN 132900-75-5

CMF C35 H36 O10

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PAGE 1-B



IC ICM G02B005-30  
ICS G02F001-1335; G02F001-1336  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 73, 75  
IT 569343-70-0P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(oriented; optical polarizing plate associated with mech. supported optical compensation layer containing)

L15 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:591449 HCAPLUS  
DOCUMENT NUMBER: 139:140736  
TITLE: Optical compensation plate and deflecting plate using the same  
INVENTOR(S): Adachi, Junichi; Yano, Shuuji; Yamaoka, Takashi; Kawai, Masayuki; Wasai, Kanako; Murakami, Nao  
PATENT ASSIGNEE(S): Nitto Denko Corporation, Japan  
SOURCE: PCT Int. Appl., 56 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062874	A1	20030731	WO 2003-JP508	20030122
W: CN, KR, US				
JP 2003287622	A	20031010	JP 2003-10101	20030117
JP 2003287623	A	20031010	JP 2003-10102	20030117
CN 1623106	A	20050601	CN 2003-802639	20030122
CN 1623108	A	20050601	CN 2003-802663	20030122
PRIORITY APPLN. INFO.:			JP 2002-14528	20020123

AB An optical compensation plate having an optical compensation layer

whose cracking under pressure was inhibited. A crack preventive layer is formed directly on an optical compensation layer surface by coating at least 1 surface of an optical compensation layer with a thermosetting adhesive and hardening the thermosetting adhesive. This cracking preventive layer prevents the cracking of the optical compensation layer. It is preferred that the optical compensation layer be a layer having a cholesteric structure. The constituent material thereof may preferably be a nonliq.-crystal polymer formed by polymerization of an oriented liquid crystal monomer, or an oriented liquid crystal polymer.

IT 569343-70-0

RL: DEV (Device component use); USES (Uses)  
(optical compensation layer in optical compensation plate for LCD)

RN 569343-70-0 HCAPLUS

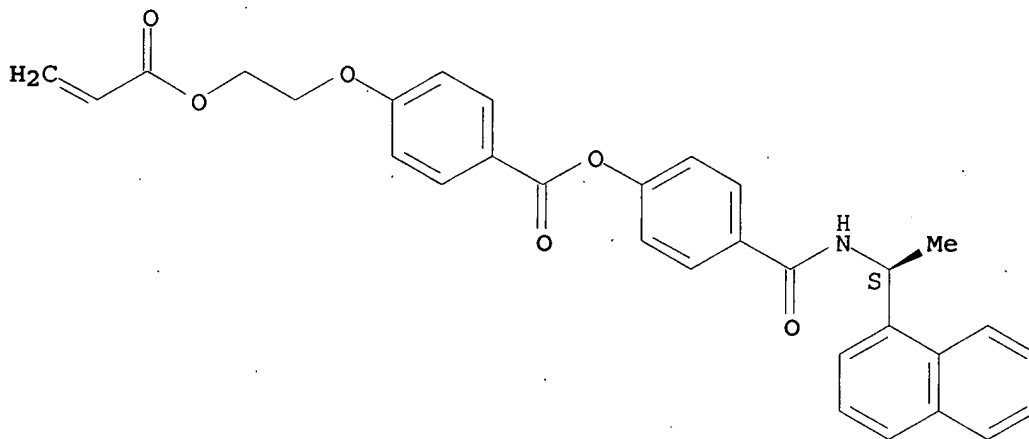
CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 2-methyl-1,4-phenylene ester, polymer with 4-[[[(1S)-1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 331955-06-7

CMF C31 H27 N O6

Absolute stereochemistry.

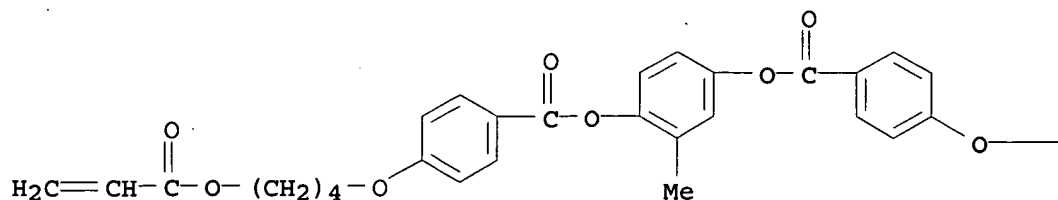


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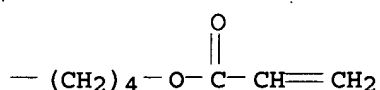
CRN 132900-75-5

CMF C35 H36 O10

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IC ICM G02B005-30  
 ICS G02F001-1336; G02F001-1335  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 74  
 IT 569343-70-0  
 RL: DEV (Device component use); USES (Uses)  
 (optical compensation layer in optical compensation plate for LCD)  
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:376835 HCAPLUS  
 DOCUMENT NUMBER: 133:11082  
 TITLE: Chiral acrylic compound, crosslinkable liquid crystal composition, optical element, manufacture of the element, and optical part  
 INVENTOR(S): Izumi, Kyoko; Nakano, Shusaku; Yoshioka, Masahiro; Mochizuki, Osamu  
 PATENT ASSIGNEE(S): Nitto Denko Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000154168	A	20000606	JP 1998-375348	19981117
PRIORITY APPLN. INFO.:				JP 1998-375348
				19981117

OTHER SOURCE(S): MARPAT 133:11082

AB The chiral acrylic compound  $\text{CH}_2:\text{C}(\text{R}_1)\text{CO}_2(\text{CH}_2)_n(\text{CHMe})(\text{CH}_2)_m-(n-1)\text{OXO}(\text{CH}_2)_i-(h+1)(\text{CHMe})(\text{CH}_2)\text{hOCOC}(\text{R}_2):\text{CH}_2$  ( $\text{R}_1, \text{R}_2 = \text{H}, \text{Me}$ ;  $0 \leq n \leq 5$ ;  $1 \leq m \leq 6$ ;  $m \geq n + 1$ ;  $0 \leq h \leq 5$ ;  $1 \leq i \leq 6$ ;  $i \geq h + 1$ ;  $\text{X} =$  p-substituted cyclic group) is contained in the crosslinkable composition of a liquid crystal polymer. The optical element, showing CD due to Grandjean texture, is made of the above composition, which is crosslinked under orientation. The optical element is manufactured by forming Grandjean texture of the above composition and crosslinking by electromagnetic wave irradiation and/or heating. The optical part consists of the optical element and a layer with optical phase difference for converting circular polarization to linear polarization. The liquid crystalline polymer composition solution having fluidity appropriate for coating process provides the optical element with large area.

IT 270910-65-1P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(crosslinkable liquid crystal polymer composition containing chiral acrylic compound with appropriate fluidity for coating process for Grandjean texture CD optical element)

RN 270910-65-1 HCAPLUS

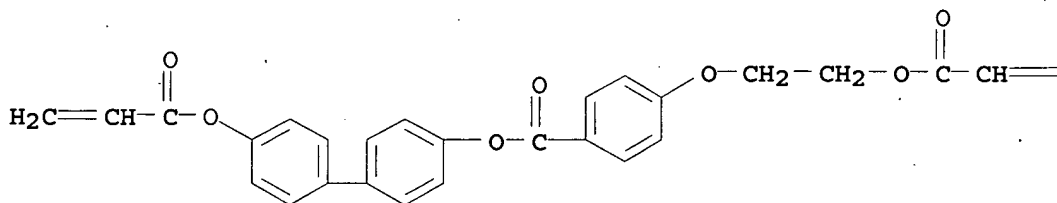
CN Benzoic acid, 4-[(2S)-2-[(1-oxo-2-propenyl)oxy]propoxy]-, 1,4-phenylene ester, polymer with 4'-cyano[1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate, 4-[[[1-(1-naphthalenyl)ethyl]amino]carbonyl]phenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate and 4'-[(1-oxo-2-propenyl)oxy][1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 270910-64-0

CMF C27 H22 O7

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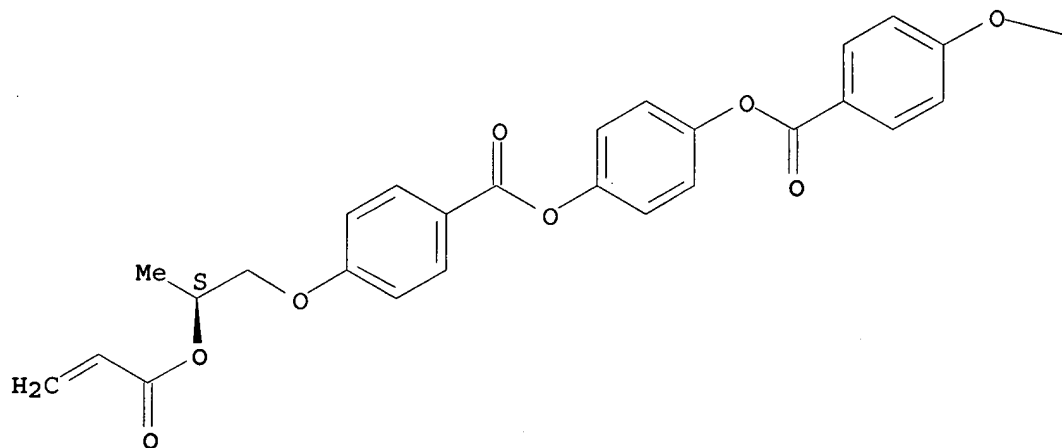
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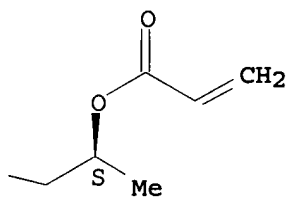
CRN 270910-62-8  
, CMF C32 H30 O10

Absolute stereochemistry.

PAGE 1-A



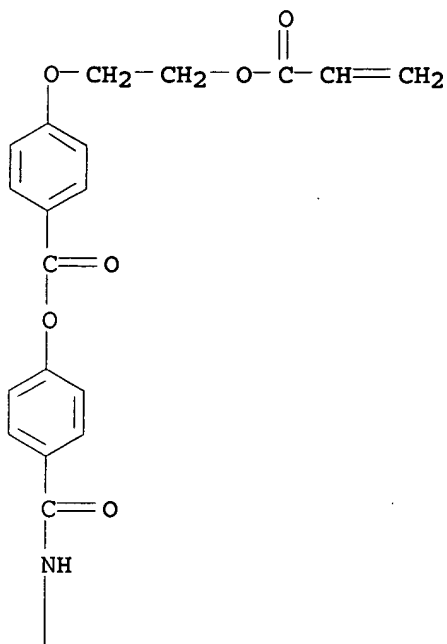
PAGE 1-B



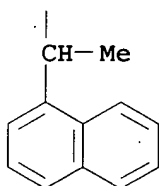
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CRN 270563-55-8  
CMF C31 H27 N O6

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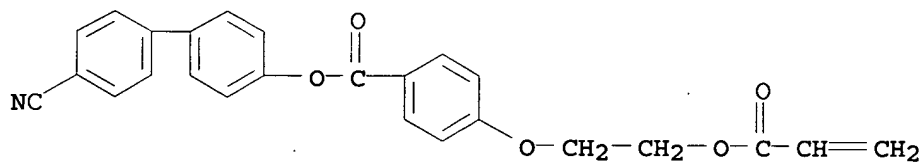
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CM 4

CRN 133945-18-3

CMF C25 H19 N O5



IC ICM C07C069-90

ICS C07C069-92; C07D493-04; C09K019-38; G02F001-13

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25, 33, 36, 38, 42  
IT 270910-65-1P  
RL: DEV (Device component use); IMF (Industrial manufacture); PRP  
(Properties); PREP (Preparation); USES (Uses)  
(crosslinkable liquid crystal polymer composition containing chiral acrylic  
compound with appropriate fluidity for coating process for  
Grandjean texture CD optical element)

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